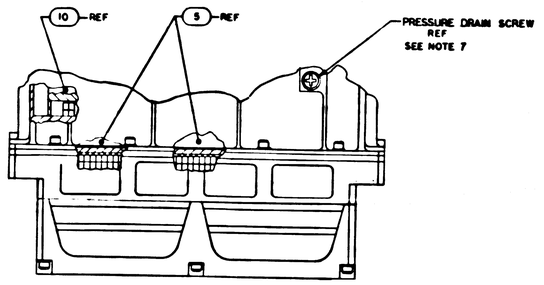
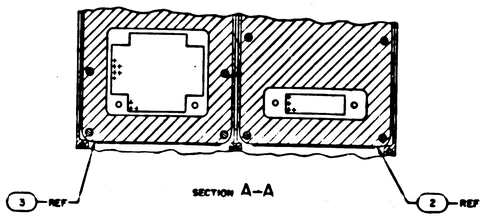
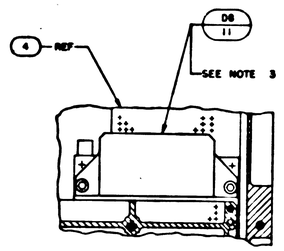
REVISIONS			
BY	DESCRIPTION	DATE	APPROVED
B	CHANGED PER TDRR [illegible]	[illegible]	[illegible]

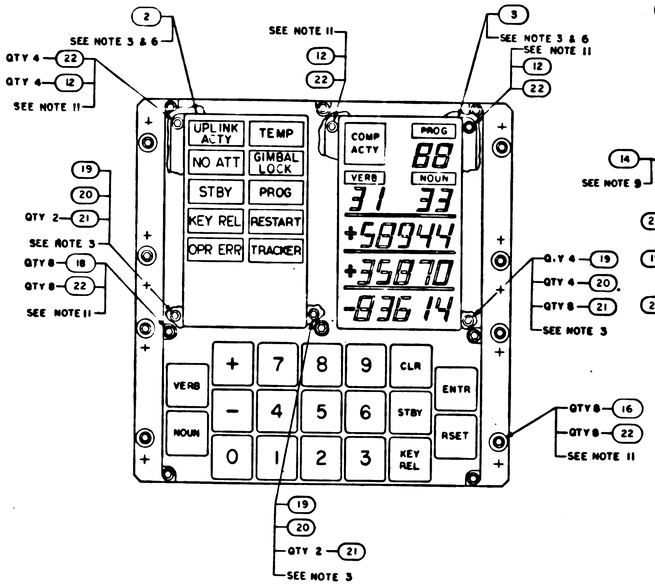


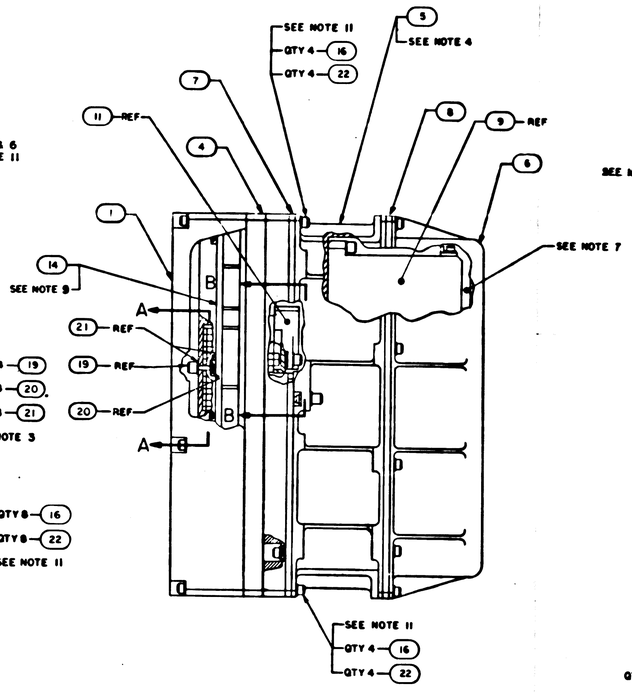


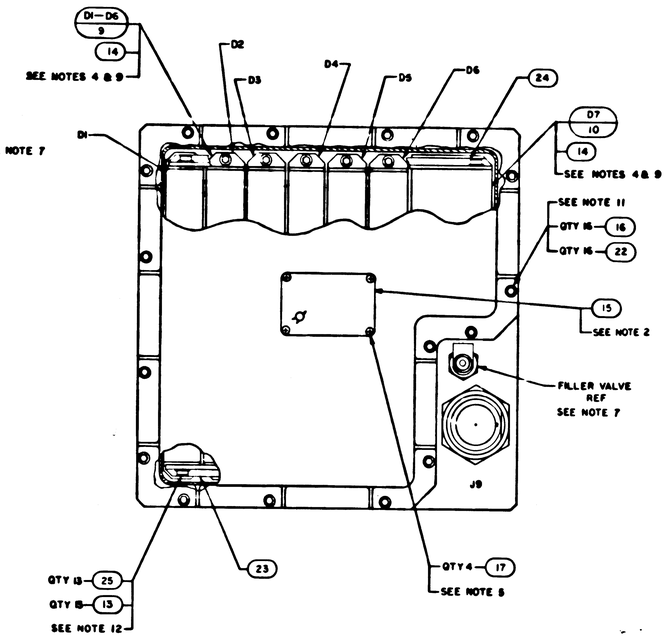
SECTION A-A



PARTIAL SECTION B-B







NOTES

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MARK AGC DSKY ASSEMBLY AND ITS RESPECTIVE PART NO., SERIAL NO., AND CONTRACT NO. MARKING TO BE PER ND1002019 AND SERIALIZE PER ND1002023
3. MOUNTING TORQUE FOR FIND NO. 19 AND JACK SCREWS OF FIND NO. 11 TO BE 8.5-9.5 INCH POUNDS
4. MOUNTING TORQUE FOR JACK SCREWS OF FIND NO. 5, 9 & 10 TO BE 15-19 INCH POUNDS
5. APPLY SEALING COMPOUND MIL-S-22473 GRADE HV TO FIND NO. 17
6. FIND NO. 2 AND 3 TO BE ASSEMBLED TO HEIGHT OF BONDED RUBBER OF FIND NO. 4 USING FIND NO. 19. BEFORE INSTALLING FIND NO. 12, ASSEMBLE IN AN ENVIRONMENT HAVING A TEMPERATURE OF 72° ±5° AND A RELATIVE HUMIDITY OF 50% OR LESS
7. FILL WITH A MINIMUM OF 87% NITROGEN AND 8.7% HELIUM AND A MAXIMUM OF 4.3% AIR TO 1.05/1.10 ATMOSPHERES. DO NOT EXCEED 2 ATMOSPHERES DURING PRESSURIZATION
8. COMPLETED ASSEMBLY SHALL BE TESTED IN ACCORDANCE WITH AND SHALL MEET ALL THE REQUIREMENTS OF PS2003994
9. APPLY FIND NO. 14 TO INTERFACE SURFACES OF THE FOLLOWING FIND NO'S: 4 & 2, 4 & 3, 5 & 9 AND 5 & 10. DO NOT APPLY FIND NO. 14 TO BONDED RUBBER SURFACES, TAPPED HOLES, OR MOUNTING HARDWARE.
10. AR DENOTES AS REQUIRED
11. MOUNTING TORQUE FOR FIND NO. 16, 18 AND 12 TO BE 8-9 INCH POUNDS
12. MOUNTING TORQUE FOR FIND NO. 13 TO BE 3.5 - 4.5 INCH POUNDS
13. FIND NO. 2 TO BE EITHER 1006387-002 OR 1006387-003

REF. DWGS

1.	UNIVERSAL DSKY SHIPPING CONTAINER	1006422
2.	DSKY CONNECTOR COVER	1006425-14
3	UNIVERSAL DSKY HANDLING FIXTURE	2014013

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO
		2003956 OUTLINE DRAWING	REF
		2005957 SIGNAL PIN ASSIGNMENT	REF
		2005954 INTERCONNECTING DIAGRAM	REF
		20059-8 SIGNAL FLOW DIAGRAM	REF
13	NAS620C4	WASHER, FLAT	25
1	2004958	BRACKET, MODULE	24
1	2004959	BRACKET, MODULE	23
46	NAS620C6	WASHER, FLAT	22
12	1004546-4	WASHER, FLAT	21
6	MS16633-4014	RING, RETAINING	20
6	2004932-001	SCREW, JACKING	19
8	1001489-59	SCREW, HEX SOCKET HEAD	18
4	MS35216-1	SCREW, PAN HEAD, CROSS RECESSED	17
32	MS16995-18	SCREW, HEX SOCKET HEAD	16
1	1004260-20	NAMEPLATE	15
AR	1006879	SILICONE COMPOUND	14
13	MS16995-10	SCREW, HEX SOCKET HEAD	13
6	MS16995-20	SCREW, HEX SOCKET HEAD	12
1	2003909-031	KEYBOARD MODULE ASSY D8	11
1	2003901-031	POWER SUPPLY ASSY MODULE D7	10
6	2003952-031	INDICATOR DRIVER MODULE D1-D6	9
1	1006349	GASKET, BONDED, RUBBER	8
1	1006350	GASKET, BONDED, RUBBER	7
1	2004900	COVER, REAR	6
1	2003-5-011	MAIN HOUSING ASSY	5
1	2003949-021	FRONT HOUSING ASSY	4
1	1006315-001	INDICATOR, DIGITAL	3
1	SEE NOTE 13	INDICATOR, ALARM	2
1	2004929-021	COVER, FRONT	1

LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS DECIMALS ANGLES
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINISH
NEXT ASSY USED ON
APPLICATION

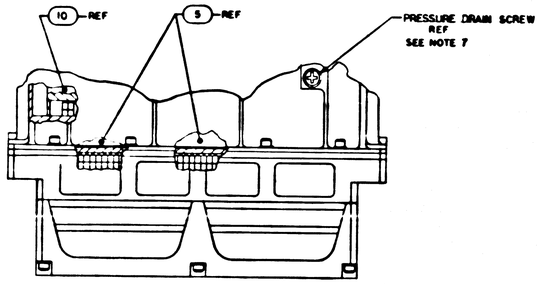
MIT INSTRUMENTATION LAB
DRAWN CHECKED APPROVAL APPROVAL
NASA APPROVAL
MIT APPROVAL

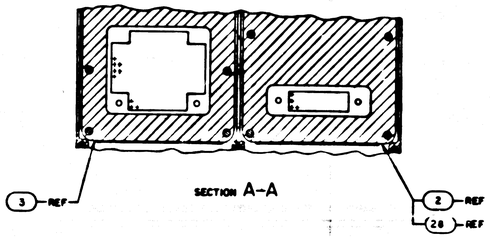
MANNED SPACECRAFT CENTER
HOUSTON TEXAS

AGC DSKY ASSEMBLY

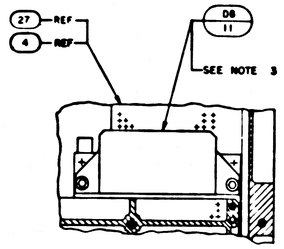
CODE IDENT NO 80230 SIZE J NASA DRAWING NO 2003994
SCALE 1/1 WT SHEET 1 OF 1

REV	DESCRIPTION	DATE	APPROVED
B	CHANGED PER TOR R-546-C DR		
C	REVISED PER TCN-T5065 DR		

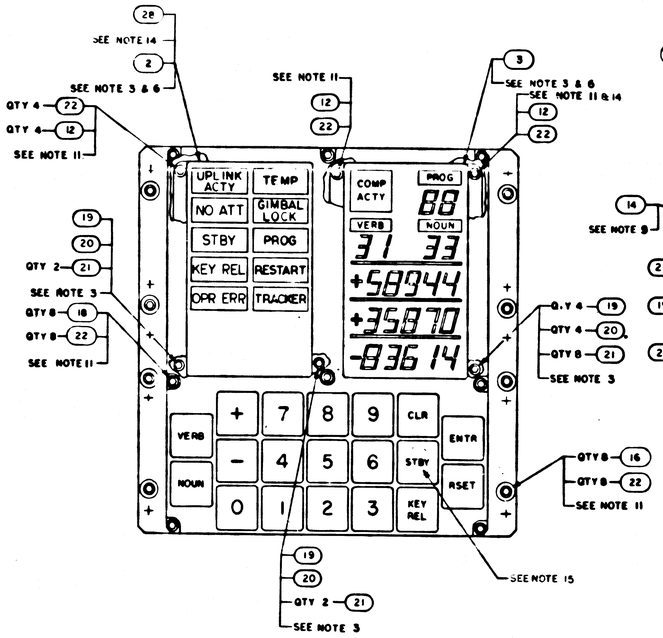


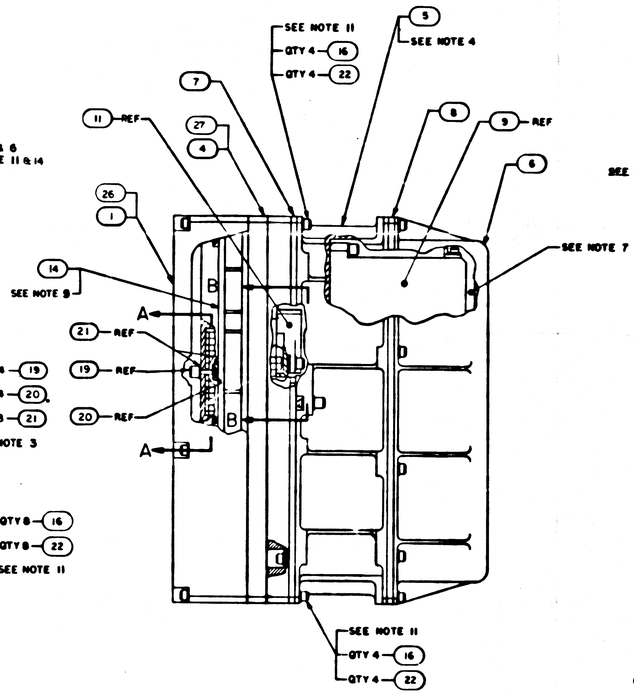


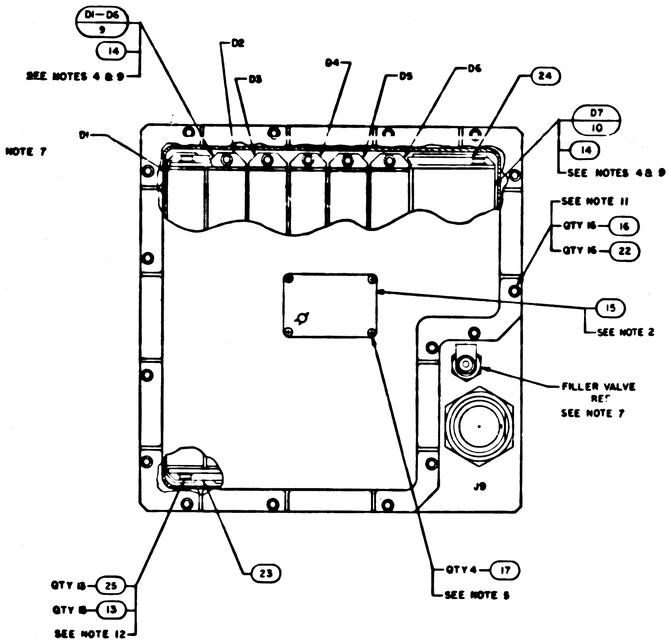
SECTION A-A



PARTIAL SECTION B-B







NOTES

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MARK DSKY ASSEMBLY AND ITS RESPECTIVE PART NO., SERIAL NO., AND CONTRACT NO. MARKING TO BE PER ND1002019 AND SERIALIZE PER ND1002023
3. MOUNTING TORQUE FOR FIND NO. 19 AND JACK SCREWS OF FIND NO. 11 & 28 TO BE 4.5-5.5 INCH POUNDS
4. MOUNTING TORQUE FOR JACK SCREWS OF FIND NO. 5, 9 & 10 TO BE 18-19 INCH POUNDS
5. APPLY SEALING COMPOUND MIL-S-22473 GRADE MV TO FIND NO. 17
6. FIND NO. 2 AND 3 TO BE ASSEMBLED TO HEIGHT OF BONDED RUBBER OF FIND NO. 4 USING FIND NO. 19. BEFORE INSTALLING FIND NO. 12. ASSEMBLE IN AN ENVIRONMENT HAVING A TEMPERATURE OF 72° ±5° AND A RELATIVE HUMIDITY OF 50% OR LESS
7. FILL WITH A MINIMUM OF 87% NITROGEN AND 8.7% HELIUM AND A MAXIMUM OF 4.3% AIR TO 1.05 1.10 ATMOSPHERES. DO NOT EXCEED 2 ATMOSPHERES DURING PRESSURIZATION
8. COMPLETED ASSEMBLY SHALL BE TESTED IN ACCORDANCE WITH AND SHALL MEET ALL THE REQUIREMENTS OF PS2003994
9. APPLY FIND NO. 14 TO INTERFACE SURFACES OF THE FOLLOWING FIND NO'S: 4 OR 27 & 2 OR 28, 4 OR 27 & 3, 5 & 9, AND 5 & 10. DO NOT APPLY FIND NO. 14 TO BONDED RUBBER SURFACES, TAPPED HOLES, OR MOUNTING HARDWARE.
10. AR DENOTES AS REQUIRED
11. MOUNTING TORQUE FOR FIND NO. 16, 18 AND 12 TO BE 8-9 INCH POUNDS
12. MOUNTING TORQUE FOR FIND NO. 13 TO BE 3.5-4.5 INCH POUNDS
13. FIND NO. 2 TO BE EITHER 1006387-002 OR 1006387-003
14. FIND NO. 8 TO BE ASSEMBLED TO HEIGHT OF BONDED RUBBER OF FIND NO. 27 USING FIND NO. 19 BEFORE INSTALLING FIND NO. 12. FIND NO. 26 TO BE ASSEMBLED USING EXISTING JACKING SCREWS. ASSEMBLE IN AN ENVIRONMENT HAVING A TEMPERATURE OF 72° ±5° F AND A RELATIVE HUMIDITY OF 50% OR LESS.
15. THE -C21 CONFIGURATION SHALL REFLECT NOMENCLATURE AS SHOWN. THE -C21 CONFIGURATION SHALL REFLECT "NO" IN KEY POSITION INDICATED.

REF. DWGS

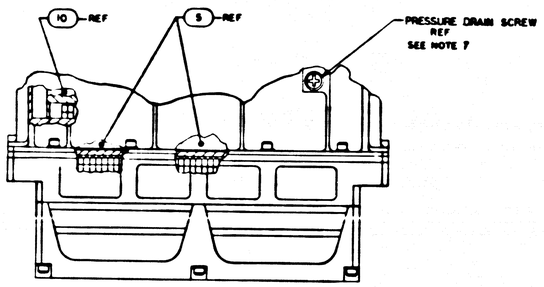
1.	UNIVERSAL DSKY SHIPPING CONTAINER	1006422
2.	DSKY CONNECTOR COVER	1006425-16
3	UNIVERSAL DSKY HANDLING FIXTURE	2014013

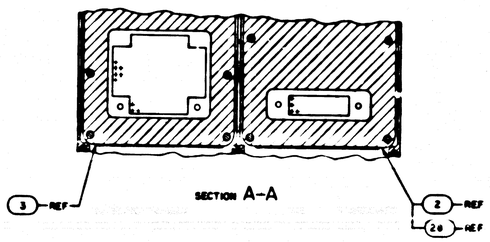
-C21	1 THRU 5, 7 THRU 12, 14 & 15
-011	1 THRU 13 & 15
DASH NO.	APPLICABLE NOTES
NOTE APPLICATION	

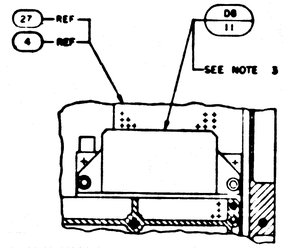
		2003956	OUTLINE DRAWING REF
		2005957	SIGNAL PIN ASSIGNMENT REF
		2005954	INTERCONNECTING DIAGRAM REF
		2005918	SIGNAL FLOW DIAGRAM REF
1	—	2003993-011	INDICATOR ALARM COVER ASSY 26
1	—	2003993-021	FRONT HOUSING ASSY 27
1		2-473	PACKING 25
13	13	NAS620C4	WASHER, FLAT 25
1	1	2004958	BRACKET, MODULE 24
1	1	2004959	BRACKET, MODULE 23
42	46	NAS620C6	WASHER, FLAT 22
8	12	1004546-4	WASHER, FLAT 21
4	6	MS16633-4014	RING, RETAINING 20
4	6	2004932-001	SCREW, JACKING 19
2	8	1001489-59	SCREW, SOCKET HEAD 18
4	4	MS35216-41	SCREW, PAN HEAD, CROSS RECESSED 17
32	32	MS16995-18	SCREW, HEX SOCKET HEAD 16
	1	1004260-20	NAMEPLATE 15
AR	AR	1006879	SILICONE COMPOUND 14
13	13	MS16995-10	SCREW, HEX SOCKET HEAD 13
2	6	MS16995-20	SCREW, HEX SOCKET HEAD 12
1	1	2003909-031	KEYBOARD MODULE ASSY 08 11
1	1	2003901-031	POWER SUPPLY ASSY MODULE D7 10
6	6	2003952-031	INDICATOR DRIVER MODULE D1-D6 9
1	1	1006349	GASKET, BONDED, RUBBER 8
1	1	1006350	GASKET, BONDED, RUBBER 7
1	1	2004900	COVER, REAR 6
1	1	2003885-011	MAIN HOUSING ASSY 5
1	1	2003949-021	FRONT HOUSING ASSY 4
1	1	1006315-001	INDICATOR, DIGITAL 3
1	1	SEE NOTE 13	INDICATOR, ALARM 2
1	—	2004929-021	COVER, FRONT 1
QTY REF.	QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION FIND NO
-C21	-011	LIST OF MATERIALS	

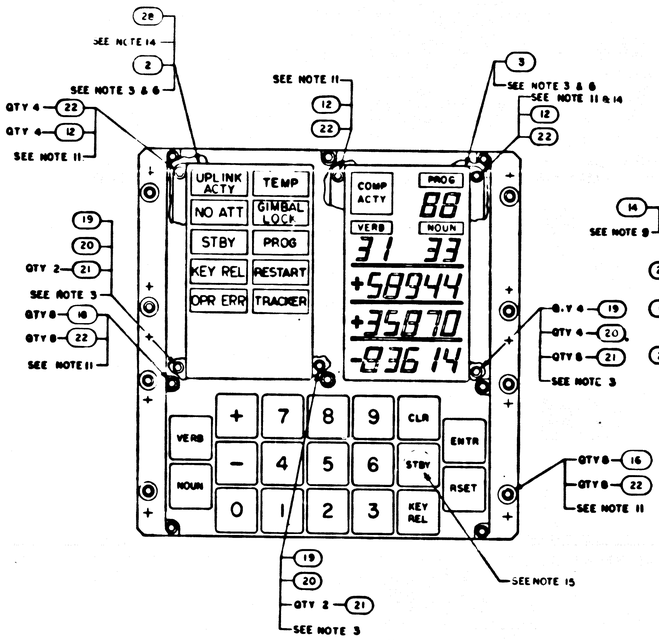
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES		IBM INSTRUMENTATION LAB CAMBRIDGE MASS	MANNED SPACECRAFT CENTER HOUSTON TEXAS
DO NOT SCALE THIS DRAWING		DRAWN CHECKED APPROVED APPROVED	AGC DSKY ASSEMBLY
MATERIAL		NASA APPROVAL	CODE IDENT NO 80230 SIZE J NASA DRAWING NO 2003994
HEAT TREATMENT			SCALE 1/1 WT SHEET 1 OF 1
FINISH			
NEXT ASSY	USED ON		
APPLICATION			

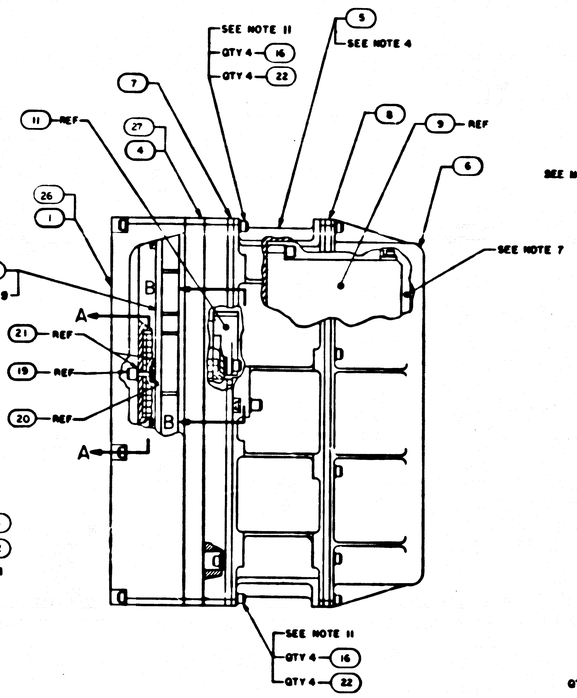
QTY			DATE	APPROVED
B	CHANGED PER TDAR-2446			
C	REVISED PER TDAR 3065			
D	REVISED PER TDAR 3256			

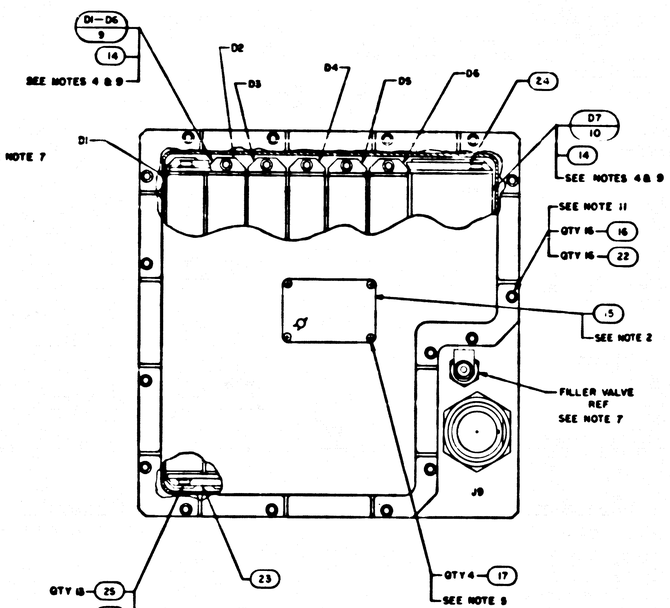












NOTES

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MARK AGC DSKY ASSEMBLY AND ITS RESPECTIVE PART NO., SERIAL NO., AND CONTRACT NO. MARKING TO BE PER ND1002019 AND SERIALIZE PER ND1002023
3. MOUNTING TORQUE FOR FIND NO. 19 AND JACK SCREWS OF FIND NO. 11 & 28 TO BE [illegible] INCH POUNDS
4. MOUNTING TORQUE FOR JACK SCREWS OF FIND NO. 5, 9 & 10 TO BE 16-18 INCH POUNDS
5. APPLY SEALING COMPOUND MIL-S-22473 GRADE MV TO FIND NO. 17
6. FIND NO. 2 AND 3 TO BE ASSEMBLED TO HEIGHT OF BONDED RUBBER OF FIND NO. 4 USING FIND NO. 19. BEFORE INSTALLING FIND NO. 12, ASSEMBLE IN AN ENVIRONMENT HAVING A TEMPERATURE OF 72° ±5° AND A RELATIVE HUMIDITY OF 50% OR LESS
7. FILL WITH A MINIMUM OF 87% NITROGEN AND 8.7% HELIUM AND A MAXIMUM OF 4.3% AIR TO 1.05/1.10 ATMOSPHERES. DO NOT EXCEED 2 ATMOSPHERES DURING PRESSURIZATION
8. COMPLETED ASSEMBLY SHALL BE TESTED IN ACCORDANCE WITH AND SHALL MEET ALL THE REQUIREMENTS OF [illegible]
9. APPLY FIND NO. 14 TO INTERFACE SURFACES OF THE FOLLOWING FIND NO'S: 4 OR 27 & 2 OR 28, 4 OR 27 & 3, 5 & 9, AND 5 & 10. DO NOT APPLY FIND NO. 14 TO BONDED RUBBER SURFACES, TAPPED HOLES, OR MOUNTING HARDWARE.
10. AR DENOTES AS REQUIRED
11. MOUNTING TORQUE FOR FIND NO. 18, 8 AND 12 TO BE 8-9 INCH POUNDS
12. MOUNTING TORQUE FOR FIND NO. 13 TO BE 3.3 - 4.5 INCH POUNDS
13. FIND NO. 2 TO BE EITHER 1006387-002 OR 1006387-003
14. FIND NO. 3 TO BE ASSEMBLED TO HEIGHT OF BONDED RUBBER OF FIND NO. 27 USING FIND NO. 19 BEFORE INSTALLING FIND NO. 12. FIND NO. 28 TO BE ASSEMBLED USING EXISTING JACKING SCREWS. ASSEMBLE IN AN ENVIRONMENT HAVING A TEMPERATURE OF 72° ±5°F AND A RELATIVE HUMIDITY OF 50% OR LESS
15. THE -011 CONFIGURATION SHALL REFLECT NOMENCLATURE AS SHOWN. THE -021 CONFIGURATION SHALL REFLECT "PRO" IN KEY POSITION INDICATED.

REF. DWG'S

1.	UNIVERSAL DSKY SHIPPING CONTAINER	1006422
2.	DSKY CONNECTOR COVER	1006425-14
3	UNIVERSAL DSKY HANDLING FIXTURE	2014013

-021	1 THRU 5, 7 THRU 12, 14 & 15
-011	1 THRU 13 & 15
DASH NO.	APPLICABLE NOTES
NOTE APPLICATION	

		2003956	OUTLINE DRAWING	REF
		2005957	SIGNAL PIN ASSIGNMENT	REF
		2005954	INTERCONNECTING DIAGRAM	REF
		2005918	SIGNAL FLOW DIAGRAM	REF
1		2003958-011	INDICATOR ALARM ASSEMBLY	24
1		[illegible] -41	[illegible] ASSY	6
1		2004[illegible]	[illegible] ASSY	20
13	13	NAS620C4	WASHER, FLAT	25
1	1	2004958	BRACKET, MODULE	24
1	1	2004959	BRACKET, MODULE	23
42	46	NAS620C6	WASHER, FLAT	22
5	12	1004546-4	WASHER, FLAT	21
4	6	MS46633-4014	RING, RETAINING	20
4	6	2004932-001	SCREW, JACKING	19
4	8	1001489-59	SCREW, HEX SOCKET HEAD	18
4	4	MS35216-1	SCREW, PAN HEAD, CROSS RECESSED	17
32	32	MS16995-18	SCREW, HEX SOCKET HEAD	16
1	1	1004280-20	NAMEPLATE	15
AR	AR	1006879	SILICONE COMPOUND	14
3	13	MS16995-10	SCREW, HEX SOCKET HEAD	13
2	6	MS16995-20	SCREW, HEX SOCKET HEAD	12
1	1	2003909-031	KEYBOARD MODULE ASSY D8	11
1	1	2003901-031	POWER SUPPLY ASSY MODULE D7	10
6	6	2003952-031	INDICATOR DRIVER MODULE D1-D6	9
1	1	1006349	GASKET, BONDED, RUBBER	8
1	1	1006350	GASKET, BONDED, RUBBER	7
1	1	2004900	COVER, REAR	6
1	1	2003[illegible]5-011	MAIN HOUSING ASSY	5
1	1	2003949-021	FRONT HOUSING ASSY	4
1	1	1006315-001	INDICATOR, DIGITAL	3
--	1	SEE NOTE 13	INDICATOR, ALARM	2
--	1	2004929-021	COVER, FRONT	1
QTY REQ	QTY REQ	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO
-021	-011		LIST OF MATERIALS	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ±1/64 DECIMALS ±.01 ANGLES ±1°
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINISH
NEXT ASSY | USED ON
APPLICATION

DSIF INSTRUMENTATION LAB CAMBRIDGE MASS.

MANNED SPACECRAFT CENTER HOUSTON TEXAS

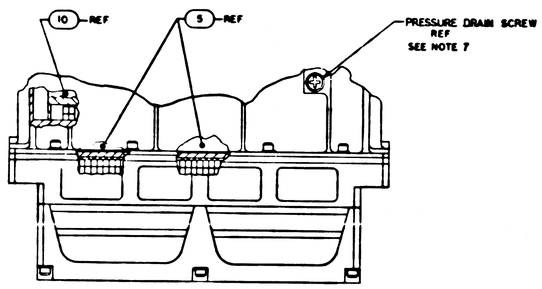
AGC DSKY ASSEMBLY

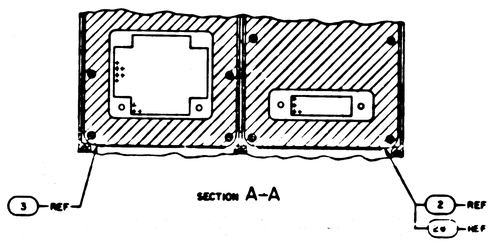
DRAWN [illegible] 8/12/66
CHECKED [illegible]
APPROVAL [illegible]
APPROVED [illegible]
MASS APPROVAL [illegible]
QUALITY APPROVAL [illegible]

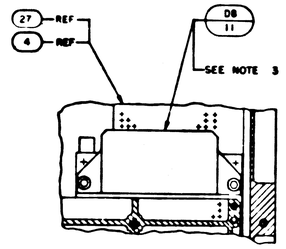
CODE IDENT NO 80230 | SIZE J | MASS DRAWING NO 2003994
SCALE 1/1 | WT | SHEET 1 OF 1

2003994 D

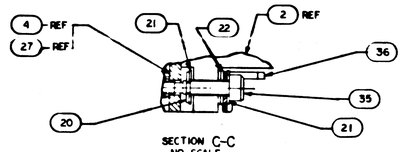
2003994



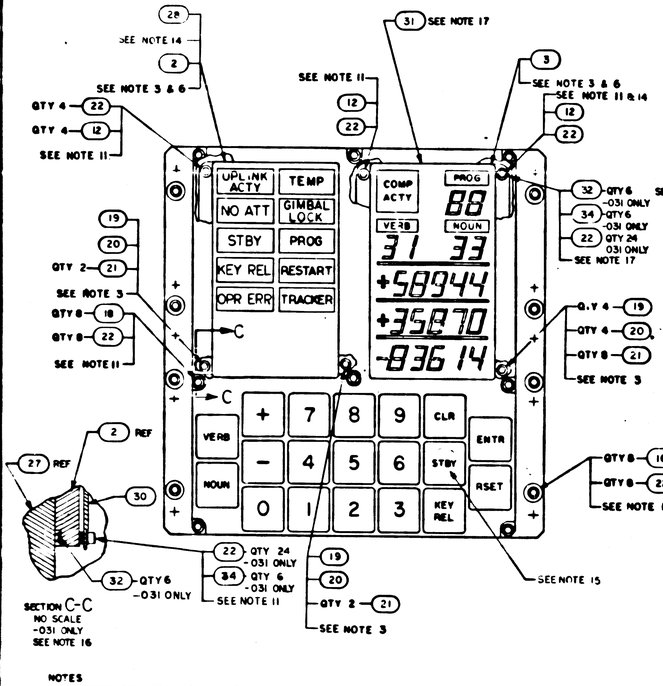




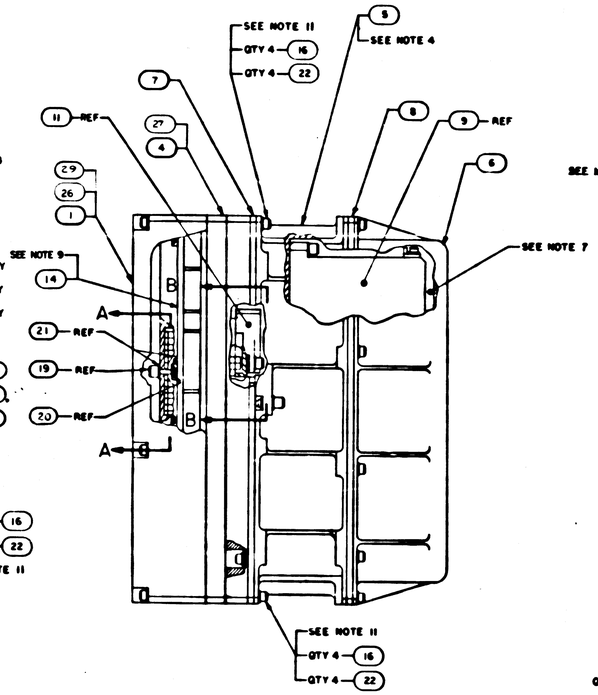
PARTIAL SECTION B-B

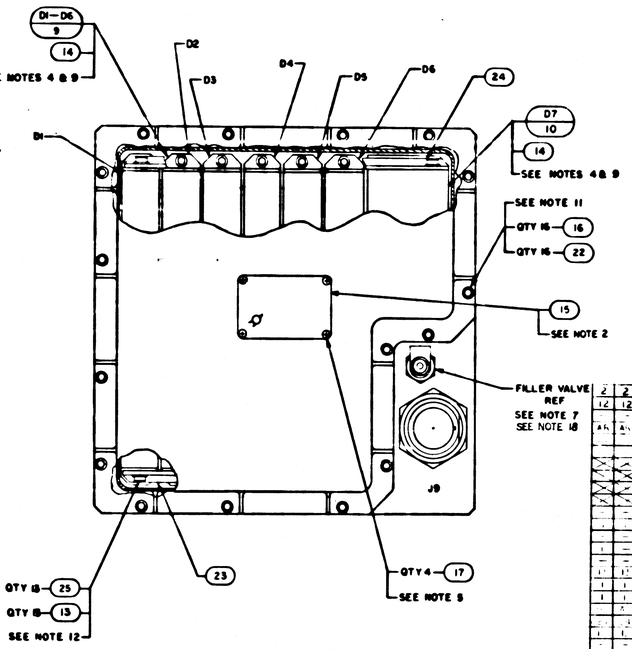


SECTION C-C
NO SCALE
-041&-051 ONLY
TYP 12 PLACES



SECTION C-C
NO SCALE
-031 ONLY
SEE NOTE 16





NOTES

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MARK "AGC DSKY ASSEMBLY" AND ITS RESPECTIVE PART NO., SERIAL NO., AND CONTRACT NO. MARKING TO BE PER ND1002019 AND SERIALIZE PER ND1002023
3. MOUNTING TORQUE FOR FIND NUMBERS 35 AND JACK SCREWS OF FIND NO. 11 & 28 TO BE [illegible] INCH POUNDS
4. MOUNTING TORQUE FOR JACK SCREWS OF FIND NO. 5, 9 & 10 TO BE 15-18 INCH POUNDS
5. APPLY SEALING COMPOUND MIL-S-22473 GRADE WTO TO FIND NO.17
6. FIND NO. 2 AND 3 TO BE ASSEMBLED TO HEIGHT OF BONDED RUBBER OF FIND NO. 4 USING FIND NO. 19. BEFORE INSTALLING FIND NO. 12, ASSEMBLE IN AN ENVIRONMENT HAVING A TEMPERATURE OF 72° ±5° AND A RELATIVE HUMIDITY OF 50% OR LESS
7. FILL WITH A MINIMUM OF 87% NITROGEN AND 8.7% HELIUM AND A MAXIMUM OF 4.3% AIR TO 1.05 TO 1.10 ATMOSPHERES. DO NOT EXCEED 2 ATMOSPHERES DURING PRESSURIZATION
8. COMPLETED ASSEMBLY SHALL BE TESTED IN ACCORDANCE WITH AND SHALL MEET ALL THE REQUIREMENTS OF [illegible]
9. APPLY FIND NO. 14 TO INTERFACE SURFACES OF THE FOLLOWING: FIND NO'S 1, 4 OR 27 & 2 OR 3, 4 OR 27 & 3, 5 & 9, AND 5 & 10. DO NOT APPLY TO [illegible] BONDED RUBBER SURFACES, TAPPED HOLES, OR MOUNTING HARDWARE.
10. AR DENOTES AS REQUIRED
11. MOUNTING TORQUE FOR FIND NO. 16, 18 12 AND 34 TO BE 8-9 INCH POUNDS
12. MOUNTING TORQUE FOR FIND NO. 13 TO BE 3.5-4.5 INCH POUNDS
13. FIND NO. 2 TO BE EITHER 1006387-002 OR 1006387-003
14. FIND NO. 3 TO BE ASSEMBLED TO HEIGHT OF BONDED RUBBER OF FIND NO. 27 USING FIND NO. 19 BEFORE INSTALLING FIND NO. 12. FIND NO. 28 TO BE ASSEMBLED USING EXISTING JACKING SCREWS. ASSEMBLE IN AN ENVIRONMENT HAVING A TEMPERATURE OF 72° ±5° F AND A RELATIVE HUMIDITY OF 50% OR LESS.
15. THE [illegible] NOMENCLATURE AS SHOWN THE -021, -031, -051 CONFIGURATION SHALL REFLECT "PRO" IN KEY POSITION INDICATOR.
16. ASSEMBLE FIND NO. 30 TO FIND NO. 2 USING FIND NO. 34. USE FIND NO. 22 QTY 3 PER SCREW AS SHIMS, BETWEEN FIND NO. 30 AND FIND NO. 2. USE FIND NO. 22 QTY 1 PER SCREW UNDER EACH SCREW HEAD. USE FIND NO. 32 QTY 1 PER SCREW ON THE THREADED PORTION OF EACH SCREW TO ACT AS A RETAINING RING DURING ASSEMBLY OF FRAME & LIGHT ONTO THE DSKY. CAUTION SHOULD BE EXERCISED PRIOR TO ASSEMBLY TO DSKY AS IT IS DIFFICULT TO REMOVE FIND NO. 2 AFTER ASSEMBLY WITHOUT JACKING HARDWARE.

REF. DWG'S

1. UNIVERSAL DSKY SHIPPING CONTAINER 1006422
2. DSKY CONNECTOR COVER 1006425-14
3. UNIVERSAL DSKY HANDLING FIXTURE 2014013

NOTES: 17. ASSEMBLE FIND NO. 31 TO FIND NO. 3 USING FIND NO. 34. USE FIND NO. 22, QTY 3 PER SCREW AS SHIMS BETWEEN FIND NO. 31 AND FIND NO. 3. USE FIND NO. 22, QTY 1 PER SCREW UNDER EACH SCREW HEAD. USE FIND NO. 32 ON THE THREADED PORTION OF EACH SCREW TO ACT AS A RETAINING RING DURING ASSEMBLY OF FRAME & LIGHT ONTO DSKY. CAUTION SHOULD BE EXERCISED PRIOR TO ASSEMBLY TO DSKY AS IT IS EXTREMELY DIFFICULT TO REMOVE FIND NO. 3 AFTER ASSEMBLY WITHOUT JACKING HARDWARE.

18. PRIOR TO ASSEMBLY OF FIND NO. 2 AND FIND NO. 3 TO FIND NO. 27 FILL FEMALE INSULATORS OF FIND NO. 27 OR FIND NO. 4 WITH FIND NO. 33

DASH NO.	APPLICABLE NOTES
-051	1 THRU 13 & 15
-041	1 THRU 13 & 15
-031	1 THRU 5, 7, 9, 10, 11, 12, 13, 15, 16, 17, 18
-021	1 THRU 5, 7 THRU 12, 14 & 15
-011	1 THRU 13 & 15

NOTE APPLICATION

QTY REQ	QTY REF	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
AR	AR	1006879	SILICONE COMPOUND	14
3	3	MS16995-10	SCREW, HEX SOCKET HEAD	13
2	6	MS16995-20	SCREW, HEX SOCKET HEAD	12
1	1	2003909-031	KEYBOARD MODULE ASSY DS	11
1	1	2003915-031	POWER SUPPLY ASSY MODULE D7	10
6	6	2003952-031	INDICATOR DRIVER MODULE D1-D6	9
1	1	1006349	GASKET, BONDED, RUBBER	8
1	1	1006350	GASKET, BONDED, RUBBER	7
1	1	2004900	COVER, REAR	6
1	1	2003965-011	MAIN HOUSING ASSY	5
1	1	2003949-021	FRONT HOUSING ASSY	4
1	1	1006315-001	INDICATOR, DIGITAL	3
1	1	SEE NOTE 13	INDICATOR, ALARM	2
1	1	2004929-021	COVER, FRONT	1

LIST OF MATERIALS

2	2	—	—				
12	12	—	—				
AR	AR	12	—	—	1001489-26	SCREW HEX SOCKET HEAD	34
		AR	—	—	MIL-S-8660	SILICONE COMPOUND	
		12	—	—	MS28775-026	O-RING	
		1	—	—	2003899-031	EYE PIECE ASSY	
			—		2003956	OUTLINE DRAWING	REF
			—		2005957	SIGNAL PIN ASSIGNMENT	REF
			—		2005954	INTERCONNECTING DIAGRAM	REF
			—		2005918	SIGNAL FLOW DIAGRAM	REF
		1	—	—	2003937-021	[illegible]	30
		1	—	—	2004739-001	COVER, FRONT	29
		1	—	—	[illegible]	[illegible]	[illegible]
		1	—	—	[illegible]	[illegible]	[illegible]
		1	—	—	[illegible]	[illegible]	[illegible]
13	13	13	—	—	NAS620C4	WASHER, FLAT	25
1	1	1	—	—	2004958	BRACKET, MODULE	24
1	1	1	—	—	2004959	BRACKET, MODULE	23
84	42	46	—	—	NAS620C6	WASHER, FLAT	22
—	—	—	—	12	1004546-4	WASHER, FLAT	21
4	6	—	—	6	MS16633-4014	RING, RETAINING	20
4	6	—	—	6	2004932-001	SCREW, JACKING	19
6	6	—	—	8	1001489-59	SCREW, HEX SOCKET HEAD	18
4	4	—	—	4	MS35216-1	SCREW, PAN HEAD, CROSS RECESSED	17
32	32	32	—	—	MS16995-18	SCREW, HEX SOCKET HEAD	16
1	1	—	—	1	1004260-20	NAMEPLATE	5
AR	AR	AR	—	AR	1006879	SILICONE COMPOUND	14
13	3	13	—	—	MS16995-10	SCREW, HEX SOCKET HEAD	13
—	2	6	—	—	MS16995-20	SCREW, HEX SOCKET HEAD	12
1	1	1	—	—	2003909-031	KEYBOARD MODULE ASSY DS	11
1	1	1	—	—	2003915-031	POWER SUPPLY ASSY MODULE D7	10
6	6	6	—	—	2003952-031	INDICATOR DRIVER MODULE D1-D6	9
1	1	1	—	—	1006349	GASKET, BONDED, RUBBER	8
1	1	1	—	—	1006350	GASKET, BONDED, RUBBER	7
1	1	1	—	—	2004900	COVER, REAR	6
1	1	1	—	—	2003965-011	MAIN HOUSING ASSY	5
1	1	—	—	—	2003949-021	FRONT HOUSING ASSY	4
1	1	1	—	—	1006315-001	INDICATOR, DIGITAL	3
1	1	1	—	—	SEE NOTE 13	INDICATOR, ALARM	2
—	—	—	—	—	2004929-021	COVER, FRONT	1
QTY REQ	QTY REF	QTY REF	QTY REF	QTY REF	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.

LIST OF MATERIALS

2	2	—	—				
12	12	—	—				
AR	AR	12	—	—	1001489-26	SCREW HEX SOCKET HEAD	34
		AR	—	—	MIL-S-8660	SILICONE COMPOUND	
		12	—	—	MS28775-026	O-RING	
		1	—	—	2003899-031	EYE PIECE ASSY	
			—		2003956	OUTLINE DRAWING	REF
			—		2005957	SIGNAL PIN ASSIGNMENT	REF
			—		2005954	INTERCONNECTING DIAGRAM	REF
			—		2005918	SIGNAL FLOW DIAGRAM	REF
		1	—	—	2003937-021	[illegible]	30
		1	—	—	2004739-001	COVER, FRONT	29
		1	—	—	[illegible]	[illegible]	[illegible]
		1	—	—	[illegible]	[illegible]	[illegible]
		1	—	—	[illegible]	[illegible]	[illegible]
13	13	13	—	—	NAS620C4	WASHER, FLAT	25
1	1	1	—	—	2004958	BRACKET, MODULE	24
1	1	1	—	—	2004959	BRACKET, MODULE	23
84	42	46	—	—	NAS620C6	WASHER, FLAT	22
—	—	—	—	12	1004546-4	WASHER, FLAT	21
4	6	—	—	6	MS16633-4014	RING, RETAINING	20
4	6	—	—	6	2004932-001	SCREW, JACKING	19
6	6	—	—	8	1001489-59	SCREW, HEX SOCKET HEAD	18
4	4	—	—	4	MS35216-1	SCREW, PAN HEAD, CROSS RECESSED	17
32	32	32	—	—	MS16995-18	SCREW, HEX SOCKET HEAD	16
1	1	1	—	—	1004260-20	NAMEPLATE	5
AR	AR	AR	—	AR	1006879	SILICONE COMPOUND	14
13	3	13	—	—	MS16995-10	SCREW, HEX SOCKET HEAD	13
—	2	6	—	—	MS16995-20	SCREW, HEX SOCKET HEAD	12
1	1	1	—	—	2003909-031	KEYBOARD MODULE ASSY DS	11
1	1	1	—	—	2003915-031	POWER SUPPLY ASSY MODULE D7	10
6	6	6	—	—	2003952-031	INDICATOR DRIVER MODULE D1-D6	9
1	1	1	—	—	1006349	GASKET, BONDED, RUBBER	8
1	1	1	—	—	1006350	GASKET, BONDED, RUBBER	7
1	1	1	—	—	2004900	COVER, REAR	6
1	1	—	—	—	2003965-011	MAIN HOUSING ASSY	5
1	1	1	—	—	2003949-021	FRONT HOUSING ASSY	4
1	1	1	—	—	1006315-001	INDICATOR, DIGITAL	3
1	1	1	—	—	SEE NOTE 13	INDICATOR, ALARM	2
—	—	—	—	—	2004929-021	COVER, FRONT	1
QTY REQ	QTY REF	QTY REF	QTY REF	QTY REF	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.

LIST OF MATERIALS

REVISIONS			
QTY	DESCRIPTION	DATE	APPROVED
	[illegible]		
B	CHANGED PER TDRR [illegible]		
C	REVISED PER TDRR 35065		
D	REVISED PER TDRR [illegible]		
E	REVISED PER TDRR [illegible]		

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS DECIMALS ANGLES
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINISH
NEXT ASSY USED ON
APPLICATION

DRAWN [illegible] DATE [illegible]
CHECKED
APPROVAL
APPROVAL
NASA APPROVAL
QUAL APPROVAL

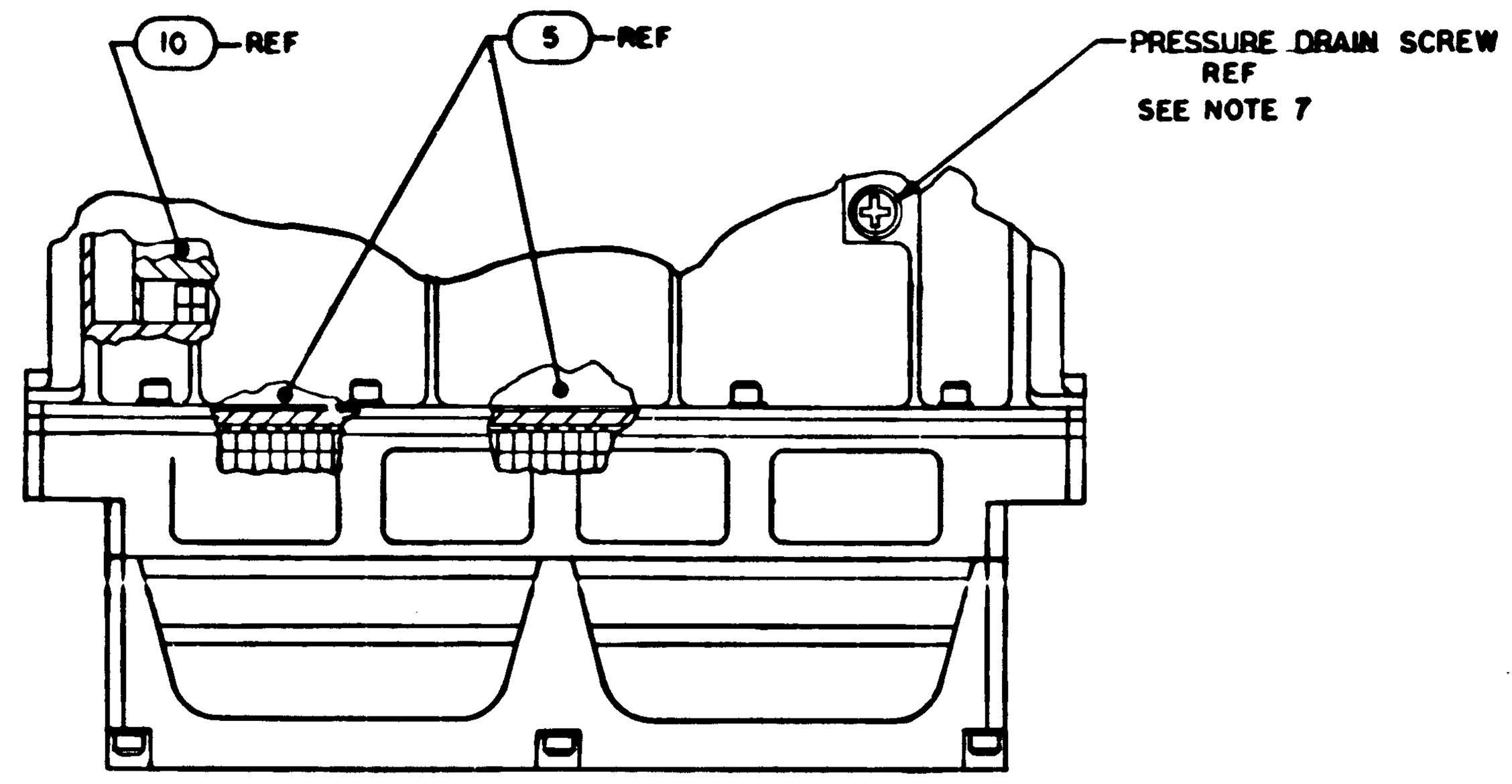
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

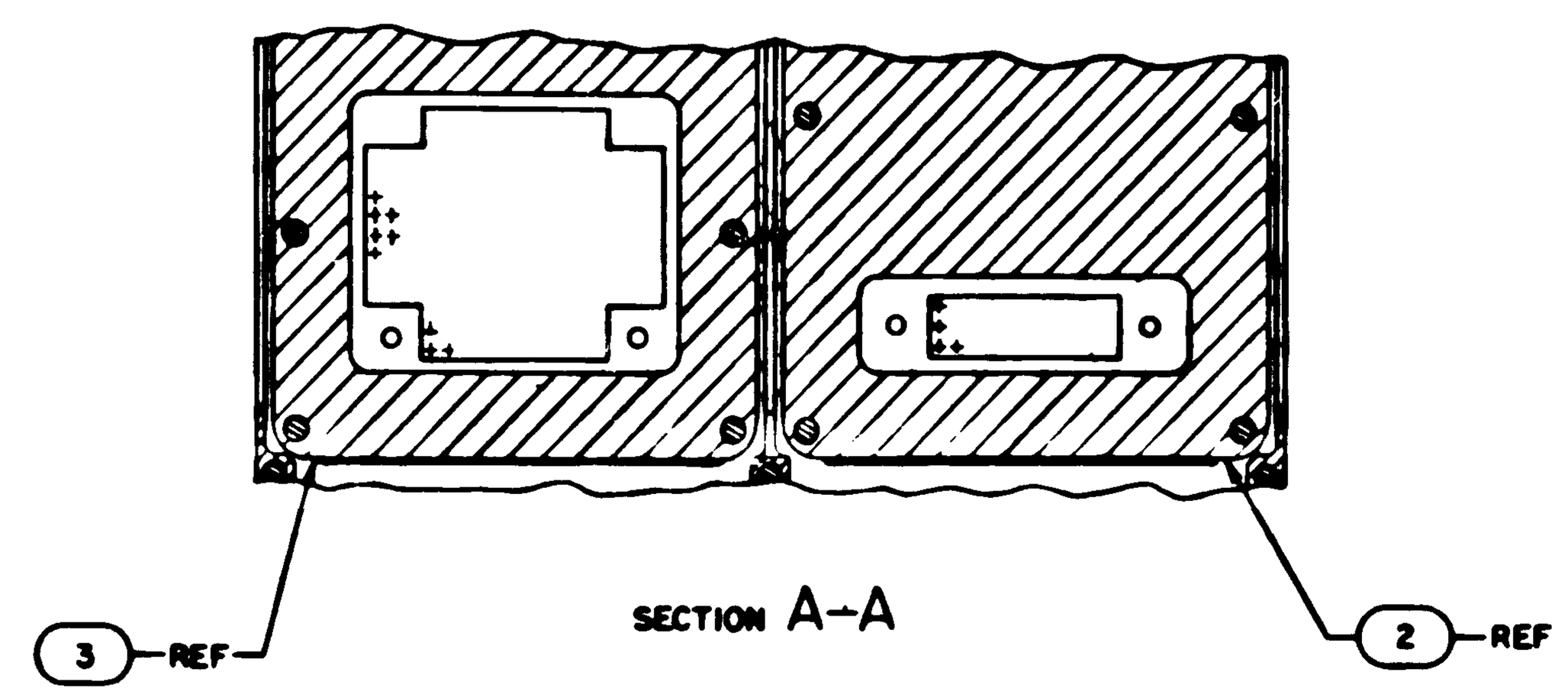
AGC DSKY ASSEMBLY

CODE IDENT NO. 80230 | SIZE J | NASA DRAWING NO. 2003994
SCALE 1/1 | WT | SHEET 1 OF 1

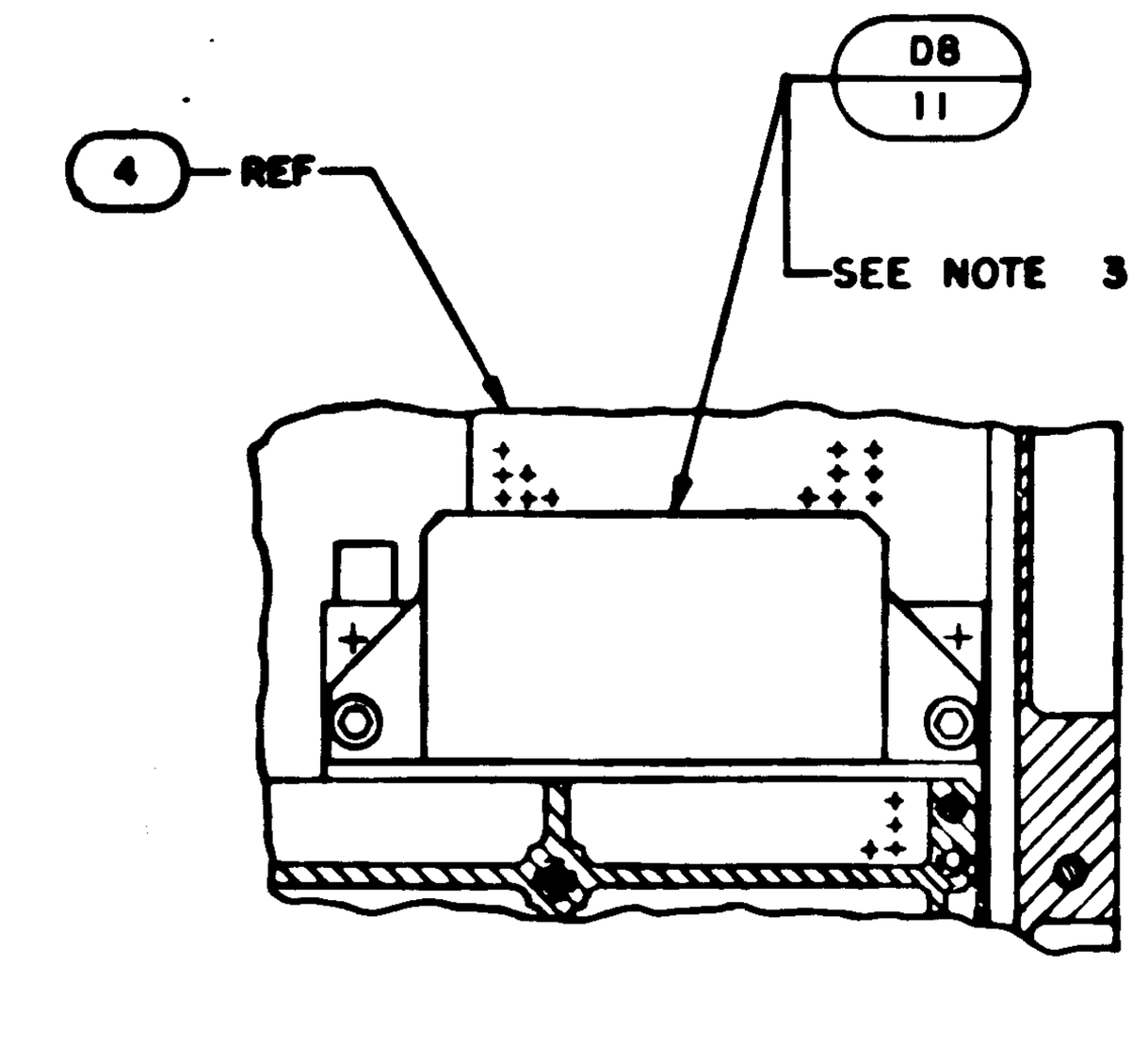
2003994 G

SYM	DESCRIPTION	DATE	APPROVED
	INITIAL RELEASE		

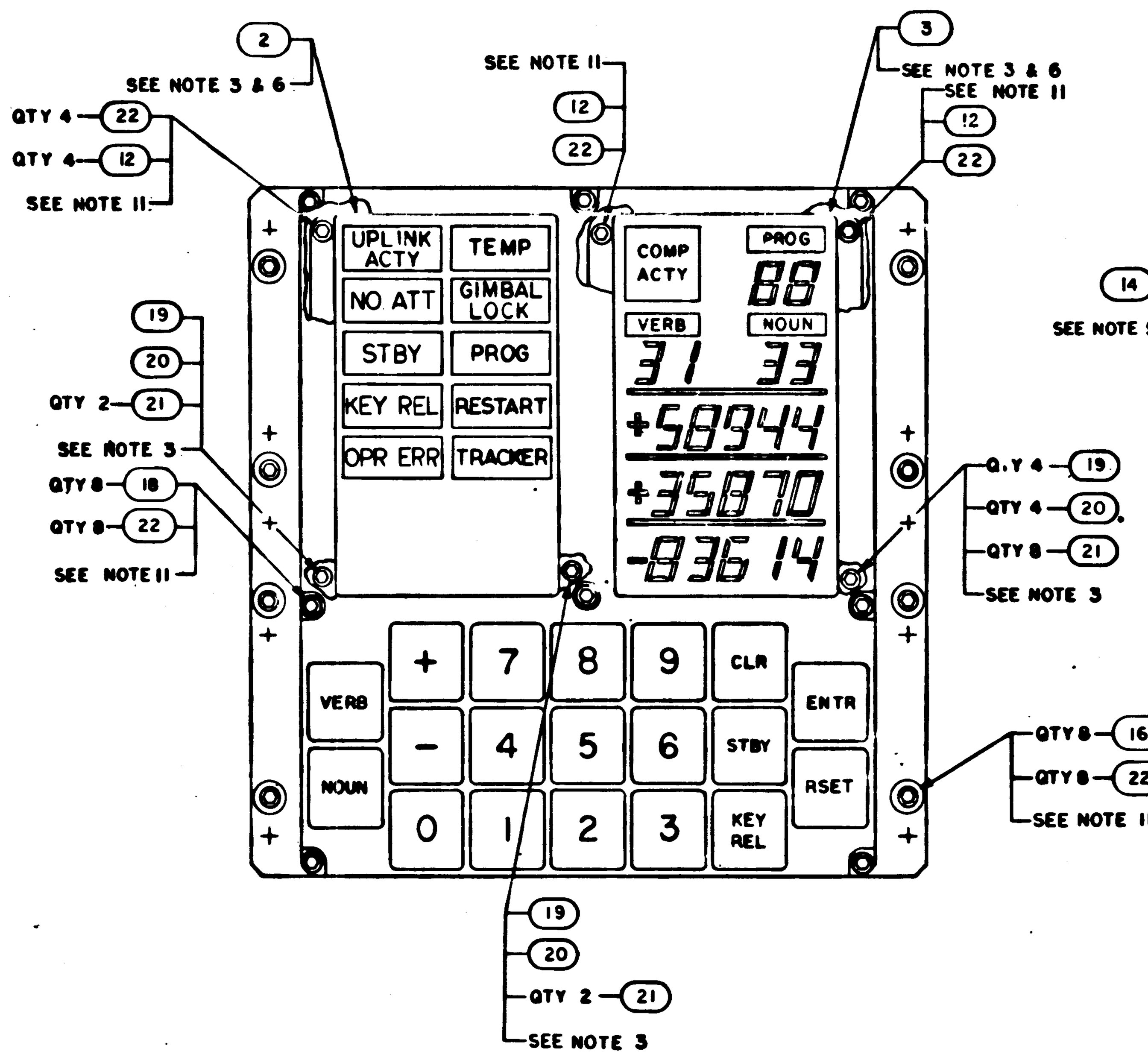


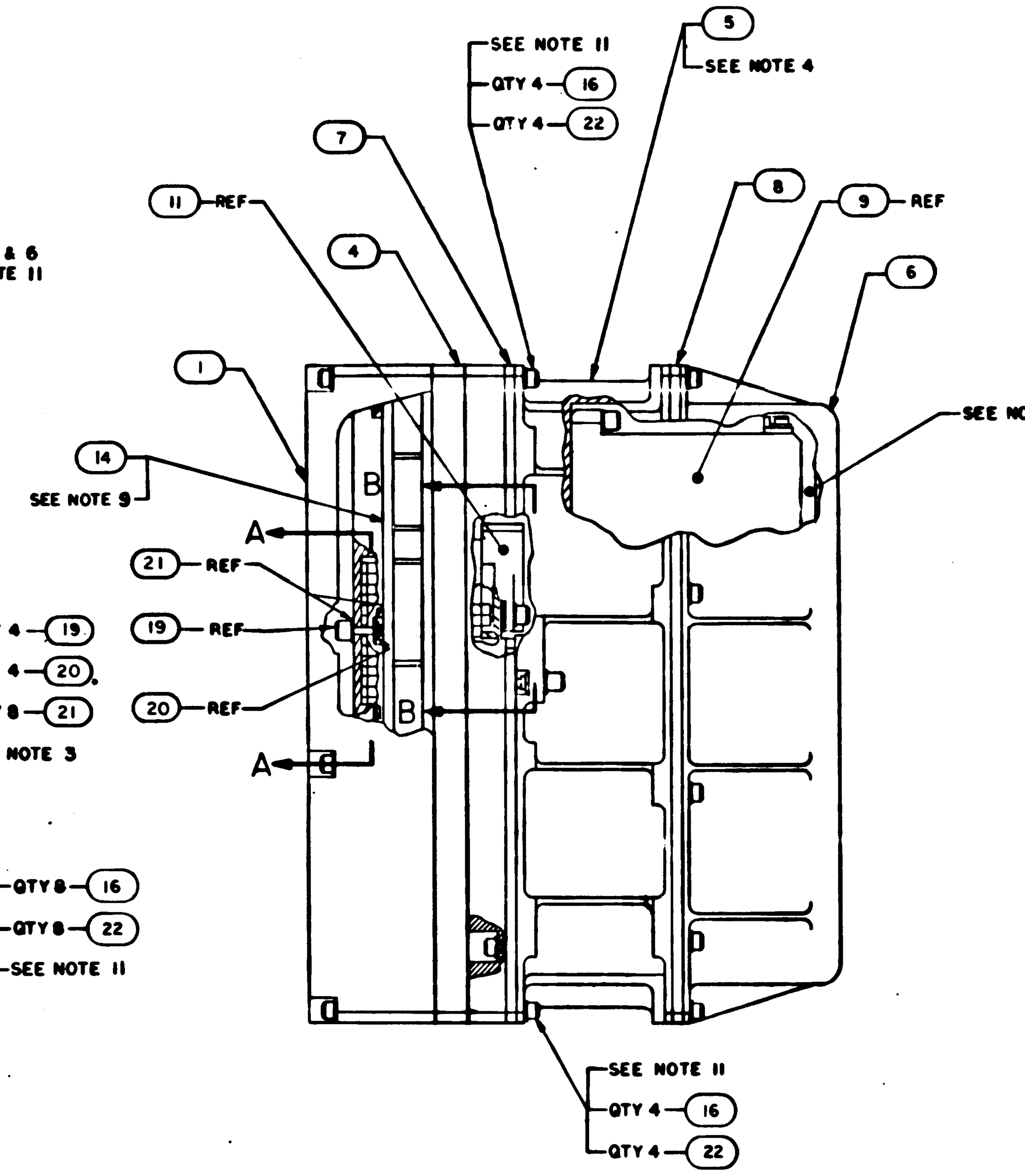


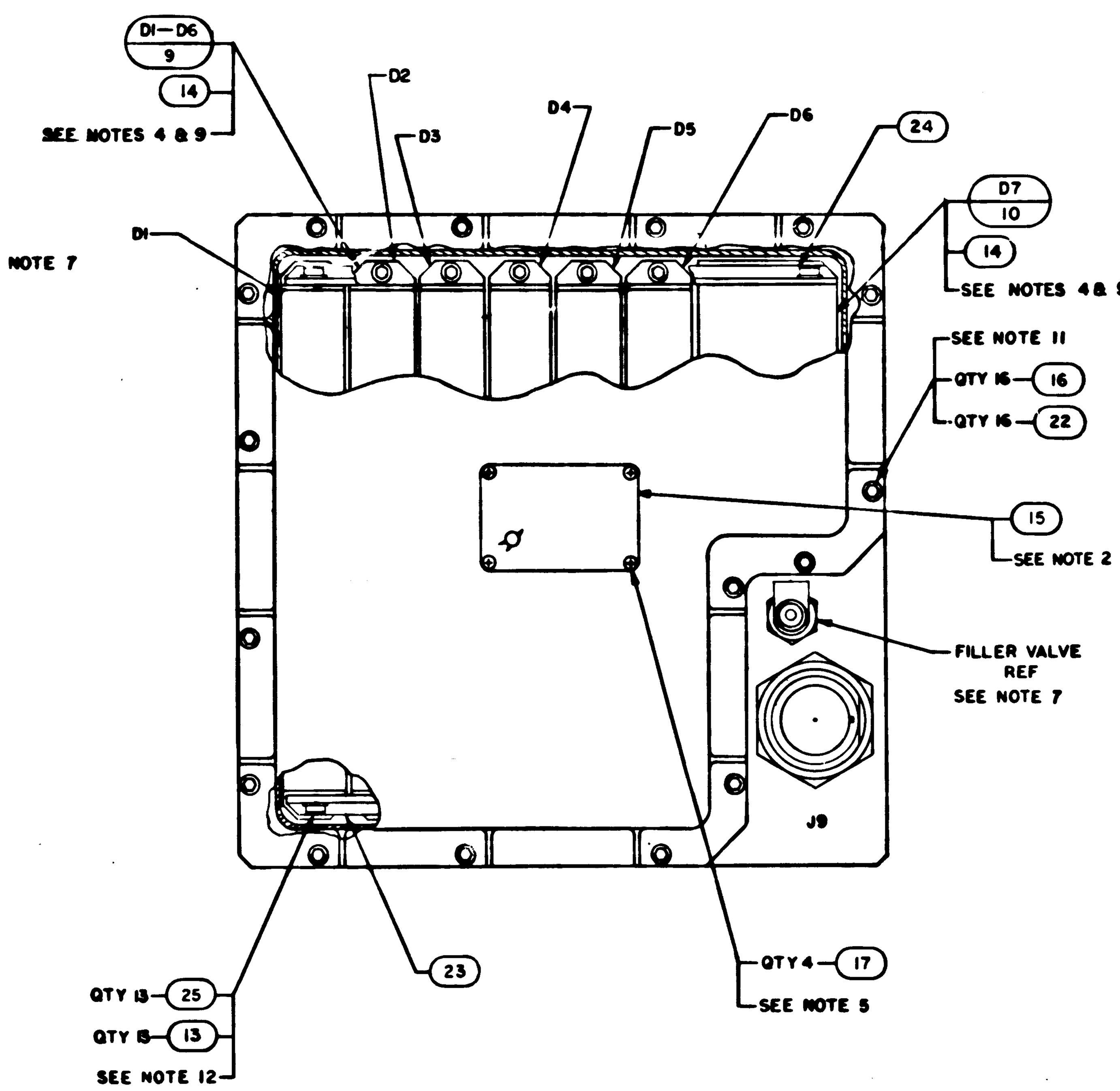
SECTION A-A



PARTIAL SECTION B-B







NOTES

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MARK "AGC DSKY ASSEMBLY" AND ITS RESPECTIVE PART NO., SERIAL NO., AND CONTRACT NO. MARKING TO BE PER ND1002019 AND SERIALIZE PER ND1002023
3. MOUNTING TORQUE FOR FIND NO. 19 AND JACK SCREWS OF FIND NO. 11 TO BE 8.5-9.5 INCH POUNDS
4. MOUNTING TORQUE FOR JACK SCREWS OF FIND NO. 5, 9 & 10 TO BE 15-19 INCH POUNDS
5. APPLY SEALING COMPOUND MIL-S-22473 GRADE HV TO FIND NO. 17
6. FIND NO. 2 AND 3 TO BE ASSEMBLED TO HEIGHT OF BONDED RUBBER OF FIND NO. 4 USING FIND NO. 19. BEFORE INSTALLING FIND NO. 12. ASSEMBLE IN AN ENVIRONMENT HAVING A TEMPERATURE OF 72° ±5° AND A RELATIVE HUMIDITY OF 50% OR LESS
7. FILL WITH A MINIMUM OF 87% NITROGEN AND 8.7% HELIUM AND A MAXIMUM OF 4.3% AIR TO 1.05 ±.10 ATMOSPHERES. DO NOT EXCEED 2 ATMOSPHERES DURING PRESSURIZATION
8. COMPLETED ASSEMBLY SHALL BE TESTED IN ACCORDANCE WITH AND SHALL MEET ALL THE REQUIREMENTS OF PS2003994
9. APPLY FIND NO. 14 TO INTERFACE SURFACES OF THE FOLLOWING FIND NO'S: 4 & 2, 4 & 3, 5 & 9 AND 5 & 10. DO NOT APPLY FIND NO. 14 TO BONDED RUBBER SURFACES
10. AR DENOTES AS REQUIRED
11. MOUNTING TORQUE FOR FIND NO. 16, 18 AND 12 TO BE 8-9 INCH POUNDS
12. MOUNTING TORQUE FOR FIND NO. 13 TO BE 3.5-4.5 INCH POUNDS

REF. DWGS

1. UNIVERSAL DSKY SHIPPING CONTAINER 1006422
2. DSKY CONNECTOR COVER 1006425-14
3. UNIVERSAL DSKY HANDLING FIXTURE 2014013

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION
X	2003956	OUTLINE DRAWING
X	2005957	SIGNAL PIN ASSIGNMENT
X	2005954	INTERCONNECTING DIAGRAM
X	2005918	SIGNAL FLOW DIAGRAM
13	NAS620C4	WASHER, FLAT
1	2004958	BRACKET, MODULE
1	2004959	BRACKET, MODULE
46	NAS620C6	WASHER, FLAT
12	1004546-4	WASHER, FLAT
6	MS16633-4014	RING, RETAINING
6	2004932-001	SCREW, JACKING
8	1001489-59	SCREW, HEX SOCKET HEAD
4	MS35216-1	SCREW, PAN HEAD, CROSS RECESSED
32	MS16995-18	SCREW, HEX SOCKET HEAD
1	1004260-20	NAMEPLATE
AR	1006879	SILICONE COMPOUND
13	MS16995-10	SCREW, HEX SOCKET HEAD
6	MS16995-20	SCREW, HEX. SOCKET HEAD
1	2003909-031	KEYBOARD MODULE ASSY D8
1	2003901-031	POWER SUPPLY ASSY MODULE D7
6	2003952-031	INDICATOR DRIVER MODULE D1-D6
1	1006349	GASKET, BONDED, RUBBER
1	1006350	GASKET, BONDED, RUBBER
1	2004900	COVER, REAR
1	2003895-011	MAIN HOUSING ASSY
1	2003949-021	FRONT HOUSING ASSY
1	1006315-001	INDICATOR, DIGITAL
1	1006387-002	INDICATOR, ALARM
1	2004929-021	COVER, FRONT

011 LIST OF MATERIALS

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH

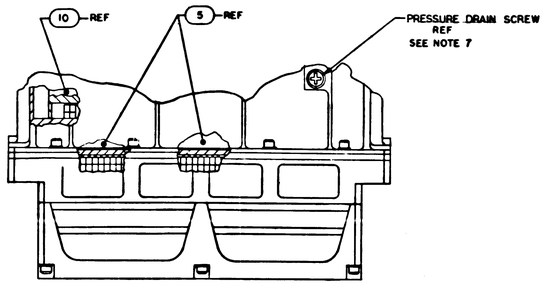
M I T INSTRUMENTATION LAB CAMBRIDGE MASS
DRAWN [signature] DATE 9 Aug 66
CHECKED [signature] 7 AUG 66
APPROVAL
APPROVAL [signature]
NASA APPROVAL [signature]
MIT APPROVAL [signature]

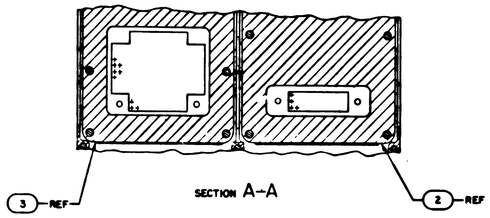
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

AGC DSKY ASSEMBLY

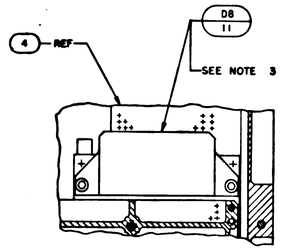
CODE IDENT NO 80230 | SIZE J | NASA DRAWING NO 2003994
SCALE 1/1 | WT | SHEET 1

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
A	INITIAL RELEASE	7/31/67	

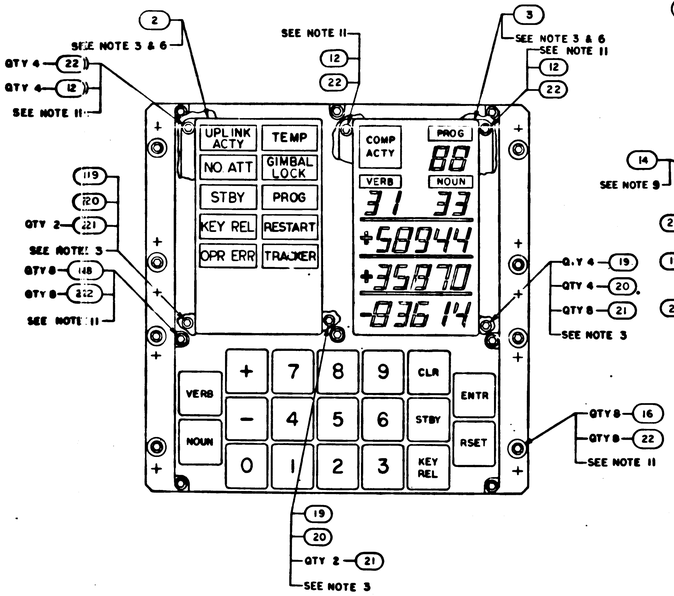


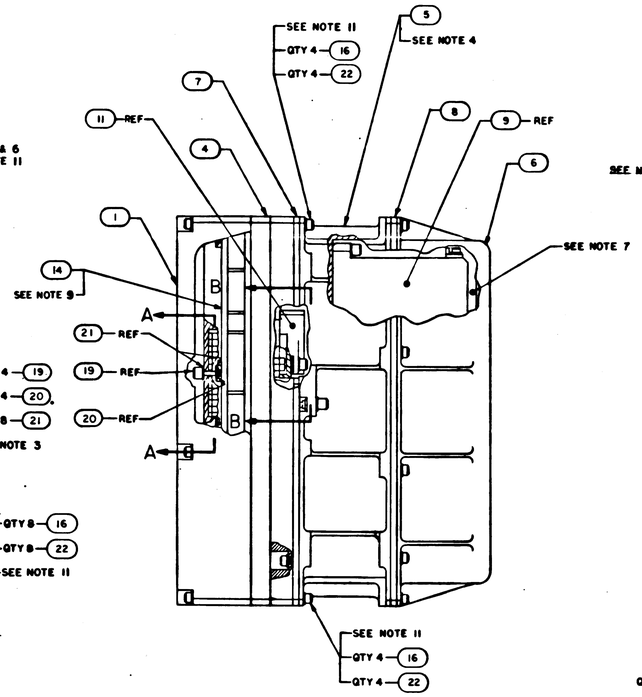


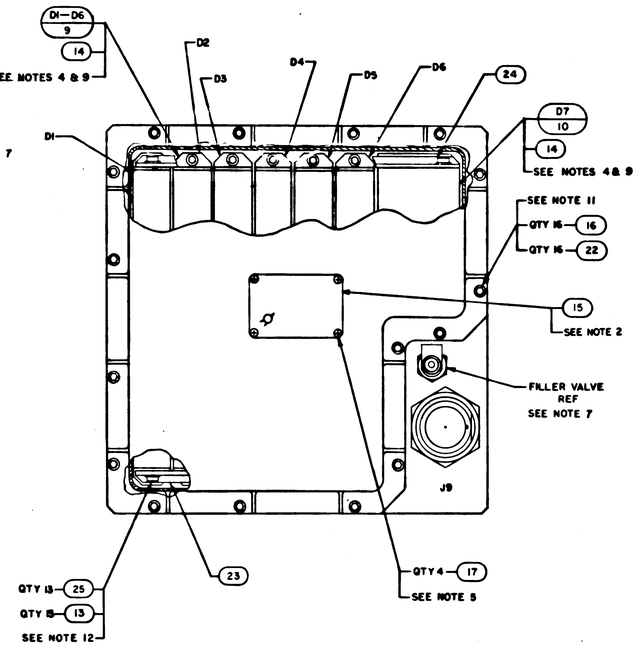
SECTION A-A



PARTIAL SECTION B-B







NOTES

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MARK AGC DSKY ASSEMBLY AND ITS RESPECTIVE PART NO., SERIAL NO., AND CONTRACT NO. MARKING TO BE PER ND1002019 AND SERIALIZE PER ND1002023
3. MOUNTING TORQUE FOR FIND NO. 19 AND JACK SCREWS OF FIND NO. 11 TO BE 8.5-9.5 INCH POUNDS
4. MOUNTING TORQUE FOR JACK SCREWS OF FIND NO. 5, 9 & 10 TO BE 16-19 INCH POUNDS
5. APPLY SEALING COMPOUND MIL-S-22473 GRADE MV TO FIND NO.17
6. FIND NO. 2 AND 3 TO BE ASSEMBLED TO HEIGHT OF BONDED RUBBER OF FIND NO. 4 USING FIND NO. 19. BEFORE INSTALLING FIND NO. 12, ASSEMBLE IN AN ENVIRONMENT HAVING A TEMPERATURE OF 72° ±5° AND A RELATIVE HUMIDITY OF 50% OR LESS
7. FILL WITH A MINIMUM OF 87% NITROGEN AND 8.7% HELIUM AND A MAXIMUM OF 4.3% AIR TO LOS/LIO ATMOSPHERES. DO NOT EXCEED 2 ATMOSPHERES DURING PRESSURIZATION
8. COMPLETED ASSEMBLY SHALL BE TESTED IN ACCORDANCE WITH AND SHALL MEET ALL THE REQUIREMENTS OF PS2003994
9. APPLY FIND NO. 14 TO INTERFACE SURFACES OF THE FOLLOWING FIND NO'S: 4 & 12, 4 & 13, 5 & 9 AND 5 & 10. DO NOT APPLY FIND NO. 14 TO BONDED RUBBER SURFACES
10. AR DENOTES AS REQUIRED
11. MOUNTING TORQUE FOR FIND NO. 15, 18 AND 12 TO BE 8-9 INCH POUNDS
12. MOUNTING TORQUE FOR FIND NO. 13 TO BE 3.5-4.5 INCH POUNDS

REF. DWG'S

1	UNIVERSAL DSKY SHIPPING CONTAINER	1006422
2	DSKY CONNECTOR COVER	1006425-14
3	UNIVERSAL DSKY HANDLING FIXTURE	2014013

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		011 LIST OF MATERIALS	
	2003956	OUTLINE DRAWING	REF
	2005957	SIGNAL PIN ASSIGNMENT	REF
	2005954	INTERCONNECTING DIAGRAM	REF
	2005918	SIGNAL FLOW DIAGRAM	REF
13	NAS620C4	WASHER, FLAT	25
1	2004958	BRACKET, MODULE	24
1	2004959	BRACKET, MODULE	23
46	NAS620C6	WASHER, FLAT	22
12	1004546-4	WASHER, FLAT	21
6	MS16633-4014	RING, RETAINING	20
6	2004932-001	SCREW, JACKING	19
8	1001489-59	SCREW, HEX SOCKET HEAD	18
4	MS35216-1	SCREW, PAN HEAD, CROSS RECESSED	17
32	MS16995-18	SCREW, HEX SOCKET HEAD	16
1	1004260-20	NAMEPLATE	15
AR	1006879	SILICONE COMPOUND	14
13	NS16995-10	SCREW, HEX SOCKET HEAD	13
6	MS16995-20	SCREW, HEX. SOCKET HEAD	12
1	2003909-031	KEYBOARD MODULE ASSY D8	11
1	2003901-031	POWER SUPPLY ASSY MODULE D7	10
6	2003952-031	INDICATOR DRIVER MODULE DI-D6	9
1	1006349	GASKET, BONDED, RUBBER	8
1	1006350	GASKET, BONDED, RUBBER	7
1	2004900	COVER, REAR	6
1	2003995-011	MAIN HOUSING ASSY	5
1	2003949-021	FRONT HOUSING ASSY	4
1	1006315-001	INDICATOR, DIGITAL	3
1	1006387-002	INDICATOR, ALARM	2
1	2004929-021	COVER, FRONT	1

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
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APPROVAL
APPROVAL
NASA APPROVAL
QUALITY APPROVAL

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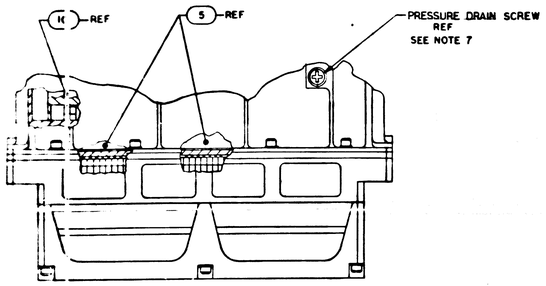
AGC DSKY ASSEMBLY

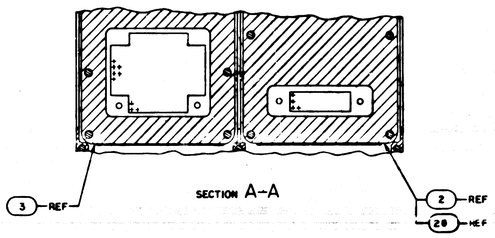
CODE IDENT NO 80230 | SIZE J | NASA DRAWING NO 2003994
SCALE 1/1 | WT | SHEET 1 OF 1

2003994 A

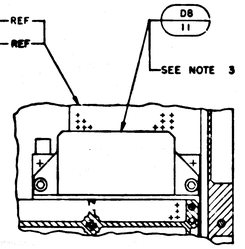
2003994 J

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVED
-	INITIAL RELEASE PER TDRR 3731[illegible]	[illegible]	[illegible]
B	CHANGED PER TDRR 33445 DR [illegible] CHK [illegible]	[illegible]	[illegible]
C	REVISED PER TDRR 35065 DR [illegible] CHK [illegible]	[illegible]	[illegible]
D	REVISED PER TDRR 36258 DR [illegible] CHK [illegible]	[illegible]	[illegible]
F	REVISED PER TDRR 36459 DR [illegible] CHK [illegible]	[illegible]	[illegible]
F	[illegible] PER TDRR [illegible] DR [illegible] CHK [illegible]	[illegible]	[illegible]
G	[illegible] PER TDRR [illegible] DR [illegible] CHK [illegible]	[illegible]	[illegible]
H	REVISED PER TDRR 37188 DR [illegible] CHK [illegible]	[illegible]	[illegible]
J	REVISED PER TDRR 37318 DR [illegible] CHK [illegible]	[illegible]	[illegible]





SECTION A-A



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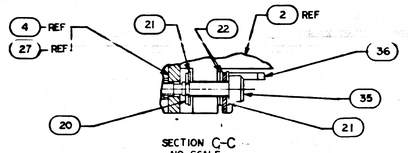
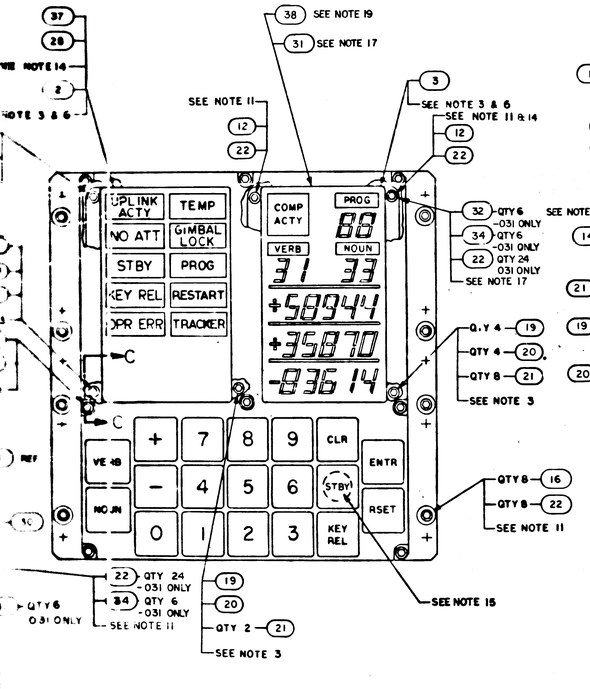
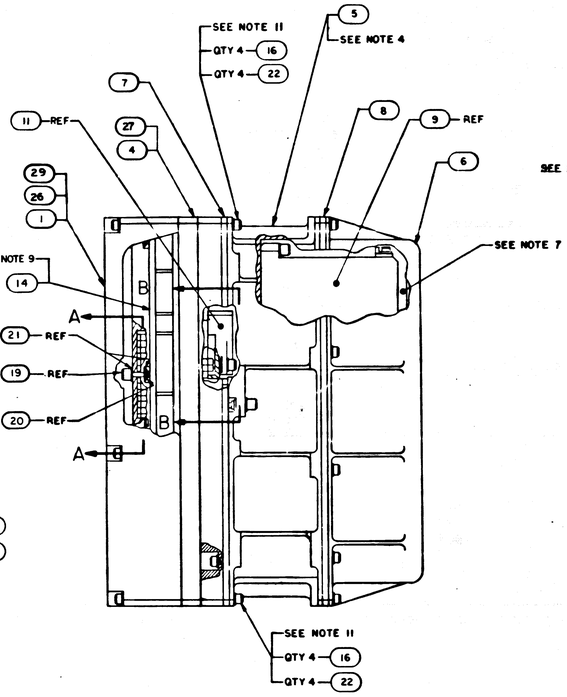
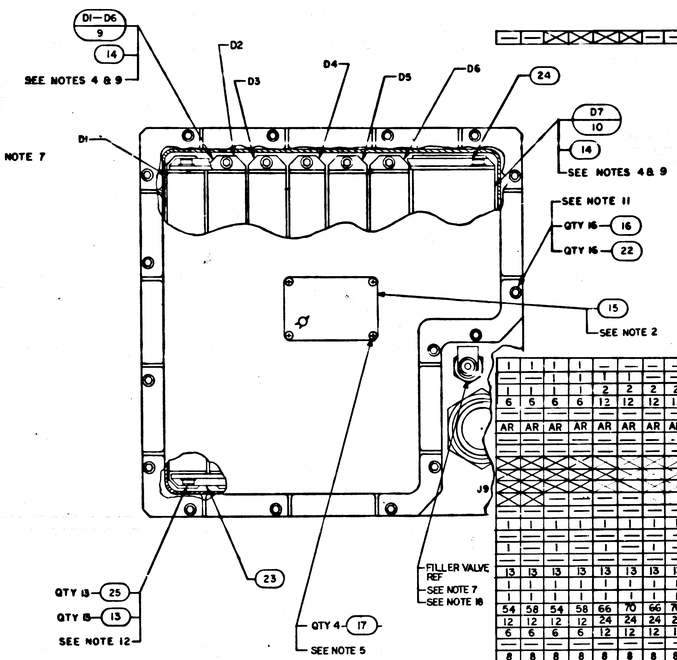


SECTION C-C
NO SCALE
-041,-051,-061 & -071
TYP 12 PLACES
FOR -081-091-111&-121
TYP 6 PLACES







2005977 | SIGNAL FLOW DIAGRAM | REF

REF DWG'S
1. UNIVERSAL DSKY SHIPPING CONTAINER 1006422
2. DSKY CONNECTOR COVER 1006425-14
3. UNIVERSAL DSKY HANDLING FIXTURE 2014013

NOTES:
12 ASSEMBLE FIND NO 31 TO FIND NO. 3 USING FIND NO.34. USE FIND NO 22 ,QTY 3 PER SCREW AS SHIMS BETWEEN FIND NO 31 AND FIND NO 3. USE FIND NO 22, QTY 1 PER SCREW UNDER EACH SCREW HEAD, USE FIND NO.32 ON THE THREADED PORTION OF EACH SCREW TO ACT AS A RETAINING RING DURING ASSEMBLY OF FRAME & LIGHT ONTO DSKY. CAUTION SHOULD BE EXERCISED PRIOR TO ASSEMBLY TO DSKY AS IT IS EXTREMELY DIFFICULT TO REMOVE FIND NO.3 AFTER ASSEMBLY WITHOUT JACKING HARDWARE.
18. PRIOR TO ASSEMBLY OF FIND NO.2 AND FIND NO. 3 OR FIND NO.38 TO FIND NO.27 OR FIND NO4 FILL FEMALE INSULATORS OF FIND NO.27 OR FIND NO.4 WITH FIND NO.33

DASH NO.	APPLICABLE NOTES
-071	1 THRU 12, 15, 18
-061	1 THRU 12, 15, 18
-051	1 THRU 13, 15, 18
-041	1 THRU 13, 15, 18
-031	1 THRU 5, 7, 9, 10, 11, 12, 13, 15, 16, 17, 18
-021	1 THRU 5, 7 THRU 12, 14 & 15
-011	1 THRU 13 & 15

NOTE APPLICATION

DASH NO	APPLICABLE NOTES
-121	1 THRU 13, 15, 16, 19, 20
-111	1 THRU 13, 15, 18, 19, 20
-091	1 THRU 12, 15, 18, 19, 20
-081	1 THRU 12, 15, 18, 19, 20

NOTE APPLICATION

19. TORQUE JACKING HARDWARE FOR FIND NO.38 TO 8.5-9.5 INCH POUNDS
20. FOR FIND NO.38 USE 2003988-011 OR 2003988-021

REF DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
[illegible] ASSEMBLY AND ITS RESPECTIVE PART NO., SERIAL NO., AND CONTRACT NO.
[illegible] TO BE PER NDI 002019 AND SERIALIZE PER NDI002023
[illegible] TORQUE FOR [illegible] AND JACK SCREWS OF FIND NO. 11 & 12 TO BE 8.5-9.5 INCH POUNDS
[illegible] TORQUE FOR JACK SCREWS OF FIND NO. 5,9 & 10 TO BE 15-19 INCH POUNDS
[illegible] SEALING COMPOUND PER 1006953-003 TO FIND NO.17
NO. 2 AND 3 TO BE ASSEMBLED TO HEIGHT OF BONDED RUBBER OF FIND NO. 4 USING
NO. 19. BEFORE INSTALLING FIND NO. 12, ASSEMBLE IN AN ENVIRONMENT HAVING A
[illegible] FEATURE OF 72 ±5° AND A RELATIVE HUMIDITY OF 50% OR LESS
A [illegible] MINIMUM OF 87% NITROGEN AND 8.7% HELIUM AND A MAXIMUM
2% AIR TO 105.7 KO ATMOSPHERES. DO NOT EXCEED 2 ATMOSPHERES DURING PRESSURIZATION
[illegible] TED ASSEMBLY SHALL BE TESTED IN ACCORDANCE WITH AND SHALL MEET ALL THE REQUIREMENTS
[illegible] FOR -071, -081, -091.
FIND NO. 14 TO INTERFACE SURFACES OF THE FOLLOWING FIND NO 3 : 4 OR 27 & 2 OR 28, 4 OR 27 & 3, 5 & 9, AND 5 & 10
[illegible] FIND NO 1 TO BONDED RUBBER SURFACES, TAPPED HOLES, OR MOUNTING HARDWARE.
[illegible] TORQUE FOR FIND NO. 13 TO BE 3.5-4.5 INCH POUNDS
[illegible] TORQUE FOR FIND NO. 16, & 12 AND 34 TO BE 8-9 INCH POUNDS
[illegible] 2 TO BE EITHER 1006387-002 OR 1006387-003
[illegible] 3 TO BE ASSEMBLED TO HEIGHT OF BONDED RUBBER OF FIND NO 27 USING FIND NO.19 BEFORE INSTALLING FIND NO.12.
[illegible] 28 TO BE ASSEMBLED USING EXISTING JACKING SCREWS ASSEMBLE IN AN ENVIRONMENT HAVING A TEMPERATURE OF 72°±5°F
RELATIVE HUMIDITY OF 50% OR LESS.
-041, -051, -061, -111 CONFIGURATION SHALL REFLECT A NOM AS SHOWN THE -021, -031, -051, -071, -091 & -121 CONFIGURATION SHALL
[illegible] NO IN KEY POSITION INDICATED
[illegible] FIND NO 30 TO FIND NO 2 USING FIND NO.34. USE FIND NO.22 QTY 3 PER SCREW AS SHIMS, BETWEEN FIND NO. 30 AND FIND NO. 2. USE FIND
[illegible] PER SCREW UNDER EACH SCREW HEAD, USE FIND NO. 32 QTY 1 PER SCREW ON THE THREADED PORTION OF EACH SCREW TO ACT AS A RETAINING
[illegible] ASSEMBLY OF FRAME & LIGHT ONTO THE DSKY. CAUTION SHOULD BE EXERCISED PRIOR TO ASSEMBLY TO DSKY AS IT IS DIFFICULT TO REMOVE
[illegible] AFTER ASSEMBLY WITHOUT JACKING HARDWARE.

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO
		LIST OF MATERIALS	
1	2004929-021	COVER, FRONT	1
1	SEE NOTE 13	INDICATOR, ALARM	2
1	1006315-001	INDICATOR, DIGITAL	3
1	2003949-021	FRONT HOUSING ASSY	4
1	2003901-011	MAIN HOUSING ASSY	5
1	2004900	COVER, REAR	6
1	1006379	GASKET, BONDED, RUBBER	7
1	1006349	GASKET, BONDED, RUBBER	8
1	2003952-031	INDICATOR DRIVER MODULE DI-D6	9
1	2003901-031	POWER SUPPLY ASSY MODULE D7	10
1	2003909-031	KEYBOARD MODULE ASSY D8	11
1	MS16995-10	SCREW, HEX SOCKET HEAD	13
2	MS16995-20	SCREW, HEX SOCKET HEAD	12
1	1004576	SILICONE COMPOUND	14
1	1004260-20	NAMEPLATE	15
1	1004546-4	RING, RETAINING	20
4	2004932-001	SCREW, JACKING	19
6	MS16995-18	SCREW, HEX SOCKET HEAD	16
4	MS35216-1	SCREW, PAN HEAD, CROSS RECESSED	17
6	1001489-59	SCREW, HEX SOCKET HEAD	18
1	2003901-021	POWER SUPPLY ASSY MODULE D7	10
1	2003909-021	KEYBOARD MODULE ASSY D8	11
1	2003949-041	FRONT HOUSING ASSY	4
1	2003897-021	I/O COVER ASSY	30
1	2003899-011	INDICATOR ALARM & COVER ASSY	28
1	2003897-041	COVER ASSY	36
1	1005025-001	INDICATOR STATUS/CAUTION	37
1	SEE NOTE 20	E/L & COVER ASSY	38
6	2004932-004	SCREW JACKING	35
—	1001489-26	SCREW HEX SOCKET HEAD	34
AR	1008954	SILICONE COMPOUND	33
1	MS28775-006	"O" RING	31
1	2003897-031	E/L COVER ASSY	29
1	2003956	OUTLINE DRAWING	REF
1	2005957	SIGNAL PIN ASSIGNMENT	REF
1	2005954	INTERCONNECTING DIAGRAM	REF
1	2005918	SIGNAL FLOW DIAGRAM	REF
1	2003899-021	I/O COVER ASSY	30
1	2003899-001	COVER FRONT	29
1	2003899-011	INDICATOR ALARM & COVER ASSY	28
1	2003949-041	FRONT HOUSING ASSY	27
1	2004739-000	COVER FRONT	26
13	NAS6204	WASHER, FLAT	25
1	2004958	BRACKET, MODULE	24
1	2004959	BRACKET, MODULE	23
54	NAS6206	WASHER, FLAT	22
12	1004546-4	WASHER, FLAT	21
6	MS16633-4014	RING, RETAINING	20
—	2004932-001	SCREW, JACKING	19
8	1001489-59	SCREW, HEX SOCKET HEAD	18
4	MS35216-1	SCREW, PAN HEAD, CROSS RECESSED	17
32	MS16995-18	SCREW, HEX SOCKET HEAD	16
1	1004260-20	NAMEPLATE	15
AR	1006379	SILICONE COMPOUND	14
13	MS16995-10	SCREW, HEX SOCKET HEAD	13
2	MS16995-20	SCREW, HEX SOCKET HEAD	12
1	2003909-031	KEYBOARD MODULE ASSY D8	11
1	2003901-031	POWER SUPPLY ASSY MODULE D7	10
6	2003952-031	INDICATOR DRIVER MODULE DI-D6	9
1	1006349	GASKET, BONDED, RUBBER	8
1	1006379	GASKET, BONDED, RUBBER	7
1	2004900	COVER, REAR	6
1	2003685-011	MAIN HOUSING ASSY	5
1	2003949-021	FRONT HOUSING ASSY	4
1	1006315-001	INDICATOR, DIGITAL	3
1	SEE NOTE 13	INDICATOR, ALARM	2
1	2004929-021	COVER, FRONT	1
QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO

QTY REQD	QTY REQD	QTY REQD	QTY REQD	QTY REQD	QTY REQD	QTY REQD	QTY REQD	QTY REQD	QTY REQD	QTY REQD	QTY REQD
121	111	091	081	071	061	051	041	031	021	011	

NEXT ASSY | USED ON | APPLICATION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS DECIMALS ANGLES
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINISH, FINISH

NEXT ASSY | USED ON | APPLICATION

DRAWN [illegible] DATE [illegible]
CHECKED [illegible]
APPROVAL [illegible]
APPROVAL [illegible]
NASA APPROVAL [illegible]
QA APPROVAL [illegible]

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CODE IDENT NO	SIZE	NASA DRAWING NO
80230	J	2003994

SCALE 1/1 | WT | SHEET 1 OF 1

2003994

2003994 JF2/21

APOLLO G&N Specification
PS 2003994 Rev A
Original Issue Date: 6 JAN 67
Release Authority: TDRR 32579
Class A Release

PROCUREMENT SPECIFICATION

PRODUCT CONFIGURATION AND ACCEPTANCE TEST REQUIREMENTS

DISPLAY AND KEYBOARD ASSEMBLY

DRAWING NO. 2003994

Record of Revisions

Date	Revision Letter	TDRR No.	Pages Revised	Approvals	
				MIT	NASA
4 Jan 67	A	32579	Initial Release		

This specification consists of pages 1 to 18 inclusive.

APPROVALS	NASA/MSC	E C Hall 12/8/66	W Stameris 8 Dec 66 MIT/IL	C S Draper 10/10/66 N G Parker 10/10/66 C Hurlbut 10/10/66 RA-7

APOLLO G&N Specification
PS 2003994 Rev B
Original Issue Date: 6 JAN 67
Release Authority: TDRR 32579
Class A Release

PROCUREMENT SPECIFICATION

PRODUCT CONFIGURATION AND ACCEPTANCE TEST REQUIREMENTS

DISPLAY AND KEYBOARD ASSEMBLY

DRAWING NO. 2003994

Record of Revisions

Date	Revision Letter	TDRR No.	Pages Revised	Approvals MIT	Approvals NASA
(N) 6 JAN 67	A	32579	Initial Release		
(M) 7 APR 67	B	33947	1, 13, & 18		

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APPROVALS	NASA/MSC	EC Hall 12/8/66 / W Stevens 8 Dec 66 MIT/IL	RAY

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PROCUREMENT SPECIFICATION

PRODUCT CONFIGURATION AND ACCEPTANCE TEST REQUIREMENTS

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Date	Revision Letter	TDRR No.	Pages Revised	Approvals MIT	Approvals NASA
6 JAN 67	A	32579	Initial Release		
7 APR 67	B	33497	1, 13, & 18		
7/13/67	C		1, 11, 13, 14, 15		

This specification consists of pages 1 to 15 inclusive.

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PS 2003994 Rev SD
Original Issue Date: 6 Jan 67
Release Authority: TDRR 32579
Class A Release

PROCUREMENT SPECIFICATION

PRODUCT CONFIGURATION AND ACCEPTANCE TEST REQUIREMENTS

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Record of Revisions

Date	Revision Letter	TDRR No.	Pages Revised	Approvals MIT	Approvals NASA
4 Jan 67	A	32579	Initial Release		
7 Apr 67	B	33497	1, 13, & 18		
7/25/67	C	[illegible]	1,11,12,13,14,15		
8/24/67	D	[illegible]	1,[illegible],11,13,14,15		
			Pages 2,3,5,6,10,12		
			Retyped		

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APPROVALS	NASA/MSC	EC Hall 12/8/66	W Stameris 8 Dec 66 MIT/IL	RAY

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Class A Release

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PRODUCT CONFIGURATION AND ACCEPTANCE TEST REQUIREMENTS

DISPLAY AND KEYBOARD ASSEMBLY

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Date	Revision Letter	TDRR No.	Pages Revised	Approvals MIT	Approvals NASA
6 Jan 67	A	32579	Initial Release		
7 Apr 67	B	33497	1, 11, & 18		
6/1[illegible]/67	C	[illegible]	[illegible],11,[illegible],14,15		
8/29/67	D	3[illegible]769	1,[illegible],11,13,1[illegible],15		
			Pages 2,3,5,6,10,12		
			Retyped		
11-16-67	E	35071	1, 2		

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APPROVALS	NASA/MSC	EC Hall 12/8/66	Wstamand 8 Dec 66 MIT/IL	RAY

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Class A Release

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4 Sept 67	A	32579	Initial Release		
7 Apr 67	B	33497	1, 13, & 18	FM	FM
7/29/67	C	34102	1, 11, 13, 14, 15	FM	FM
8/29/67	D	34765	1, 4, 7, 8, 11, 13, 14, 15	FM	FM
			Pages 2, 3, 5, 6, 10, 12		
			Retyped		
11-16-67	E	35071	1, 2	FM	FM
2-9-68	F	35839	1, 13	FM	FM

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APPROVALS	NASA/MSC	MIT/IL	RAY
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7 Apr 67	B	33497	1, 13, & 18		
7/13/67	C	[illegible]	[illegible] 14,15		
8/29/67	D	34705	1, [illegible] 11,13, [illegible] 15		
			Pages 2,3,5,6,10,12		
			Retyped		
11-16-67	E	35071	1, 2		
2-2-68	F	35139	1,13		
2-22-68	G	35918	1, [illegible]		

This specification consists of pages 1 to 15 inclusive.

APPROVALS	NASA/MSC	EC Hall 12/8/66	Whitmarsh 8 Dec 66 MIT/IL	C of the Technical Div 12/14/66	A.G. Richardson RAY

APOLLO G&N Specification
PS 2003994 Rev. H
Original Issue Date: 6 Jan 67
Release Authority: TDRR 32579
Class A Release

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4 Jan 67	A	32579	Initial Release		
7 Apr 67	B	33492	1, 13, & 18		
7/12/67	C	34125	1,11,12,13, 14,15		
8/29/67	D	34765	1,4,7,8,9,11,13,14,15		
			Pages 2,3,5,6,10,12		
			Retyped		
11-16-67	E	35071	1, 2		
2-2-68	F	35839	1,13		
3-22-68	G	35918	1,5,7,8		
4/26/68	H	36118	1, 6		

This specification consists of pages 1 to 15 inclusive.

APPROVALS	NASA/MSC	EC Hall 12/8/66	W Stameris 8 Dec 66 MIT/IL	RAY

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PS 2003994 Rev C J
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7 APR 67	B	33497	1, 13, & 18		
7/21/67	C	34167	1,11,13,14,15		
9/29/67	D	34706	1,11,13,15		
			Pages 2,3,5,6,10,12 Retyped		
11-11-67	E	35071	1, 2		
2-2-68	F	35434	1,13		
2-12-68	G	35918	1,7,8,9		
4/30/68	H	36118	1, 6		
9/11/68	J	36815	1,2,7,8,11,13		

This specification consists of pages 1 to 15 inclusive.

APPROVALS	NASA/MSC	MIT/IL	RAY
		EC Hall 12/8/66	W Stameris 8 Dec 66

1. SCOPE

1.1 This specification establishes the detail requirements for complete identification and acceptance of the Display and Keyboard Assembly Part No. 2003994-011.

2. APPLICABLE DOCUMENTS

The following documents form a part of this specification to the extent specified herein.

2.1 Effective Issues. Unless otherwise specified herein, Military and Government Standards and specifications shall be the issue in effect on the date of request for proposal or invitation to bid.

SPECIFICATIONS

APOLLO G&N

ND 1002214	General Specification for Preservation, Packaging, Packing and Container Marking of APOLLO Guidance and Navigation Major Assemblies, Assemblies, Subassemblies, Parts and Associated Ground Support Equipment.

DRAWINGS

APOLLO G&N

2003994	DISPLAY AND KEYBOARD ASSEMBLY

(Copies of Specifications, Standards, Drawings, Bulletins and Publications required by suppliers in connection with specific procurement functions should be obtained from the Procuring Activity or as directed by the Contracting Officer).

1. SCOPE

1.1 This specification establishes the detail requirements for complete identification and acceptance of the Display and Keyboard Assembly Part No. 2003994-011.

2. APPLICABLE DOCUMENTS

The following documents form a part of this specification to the extent specified herein.

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DRAWINGS

APOLLO G&N

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1. SCOPE

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DRAWINGS

APOLLO G&N

2003994	DISPLAY AND KEYBOARD ASSEMBLY

(Copies of Specifications, Standards, Drawings, Bulletins and Publications required by suppliers in connection with specific procurement functions should be obtained from the Procuring Activity or as directed by the Contracting Officer).

2.2 Conflicting Requirements. In the event of conflict between the requirements of the contract, this Specification and the documents listed in this section, the following order of precedence shall apply and the contractor shall notify MIT Apollo Management of the conflict as soon as it is determined.

a. The contract

b. This Specification

c. Documents listed in this section

3. REQUIREMENTS

3.1 PERFORMANCE. The Display and Keyboard Assembly has the capability to store, display, and transfer binary information as required by the Apollo Guidance Computer. The assembly is comprised of a Keyboard Module, Power Supply Module and six Indicator Driver Modules.

3.1.1 Continuity. The resistance between pin 39 of J9 and chassis shall be 0.5 ohms maximum.

3.1.2 Insulation Resistance. The insulation resistance between pin 39 of J9, and all other pins connected together shall be 100 megohms minimum.

3.1.3 Input Requirements. The assembly shall perform as specified herein when supplied with the following inputs:

3.1.3.1 Pins 8 and 39 of J9 shall be connected to ground (0 VDC).

3.1.3.2 DC Voltage. The following DC voltage shall be applied to the assembly:

a. 14.0 ± 0.1 VDC

b. 28.0 ± 0.1 VDC

c. 5.0 ± 0.1 VDC

3.1.3.3 AC Voltage. The AC voltage supplied to the assembly shall be 75 VRMS at 400 ± 8 cps single phase controlled to an accuracy of ± 2%, be variable up to 115 ± 5 VRMS, and be capable of being turned OFF.

3.1.3.4 Input Sync Pulse. The input sync pulse supplied to the assembly shall be generated from a source having the following characteristics:

a.	High Level	680K ohms ± 5% to ground (0 VDC)
b.	Low Level	2K ohms ± 5% returned to not more than 0.5V
c.	Frequency	800 ± 16 cps

3.1.4 Legend Illumination. With a 10K ohm potentiometer, connected between pins 4 and 5 of J9, varied from minimum to maximum resistance the brightness of the legends (Noun, Verb, Program, and the horizontal bars above each register) shall vary from OFF to 10-18 Foot-Lamberts.

3.1.5 Keyboard Illumination. With the 115 VRMS supply set to 115 ± 5 VRMS for one minute and then reduced to 75.0 ± 1.5 VRMS, the Keyboard keys shall be illuminated at 0.5 ± 0.3 Foot-Lamberts.

3.1.6 Keyboard Outputs. With each Keyboard key depressed individually, the outputs monitored at the output pins listed in Table 3-1 shall be logic "ones" and "zeros" as indicated in Table 3-1.

3.1.6.1 Logic One. A logic one shall be the equivalent of the 28 VDC supply applied thru a 1.0K ohm series resistance and a series diode.

3.1.6.2 Logic Zero. A logic zero shall be equivalent to an open circuit (no output).

3.1.7 Incandescent Indicators. To insure that the incandescent indicators and their associated latching relays are OFF, a logic input as specified below shall be applied to the pins of J9 as listed below:

Pins of J9	68	43	24	11	12	67	42	23	10	3	66	41	22	9	2
Logic Input	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0

3.1.7.1 Logic One. A logic one shall be generated from a source of 4K ohms ± 5% returned to not more than 0.4 Volts for 15.0 $^{+0}_{-1.5}$ msec.

3.1.7.2 Logic Zero. A logic zero shall be generated from a source of 680K ohms ± 5% to ground (0 VDC).

3.1.8 Flashing Alarm Characters. With the flashing timing pulse applied to pins 46 and 72 of J9, the alarm indicators KEY REL and OPR ERR shall flash.

3.1.8.1 Flasher Timing Pulse. The Flasher Timing Pulse applied to the assembly shall be generated from a source having the following characteristics:

a.	High Level	680K ohms ± 5% to ground (0 VDC)
b.	Low Level	4K ohms ± 5% returned to not more than 0.4V
c.	Frequency	1.5 ± 0.3 cps
d.	Duty Cycle	approximately 50% (for reference only)

3.1.9 Flashing Noun Characters. With the Flasher Timing Pulse specified in paragraph 3.1.8.1 applied to pin 70 of J9 and the Noun numerical characters programmed for 8's (ref. Tables 3-4 and 3-5), the numerical characters shall flash.

3.1.10 Flashing Verb Characters. With the Flasher Timing Pulse specified in paragraph 3.1.8.1 applied to pin 70 of J9 and the Verb numerical characters programmed for 8's (ref. Tables 3-4 and 3-5), the numerical characters shall flash.

3.1.7.1 Logic One. A logic one shall be generated from a source of 4K ohms ± 5% returned to not more than 0.4 Volts for 15.0 $^{+0}_{-1.5}$ msec.

3.1.7.2 Logic Zero. A logic zero shall be generated from a source of 680K ohms ± 5% to ground (0 VDC).

3.1.8 Flashing Alarm Characters. With the flashing timing pulse applied to pins 46 and 72 of J9, the alarm indicators KEY REL and OPR ERR shall flash.

3.1.8.1 Flasher Timing Pulse. The Flasher Timing Pulse applied to the assembly shall be generated from a source having the following characteristics:

a.	High Level	680K ohms ± 5% to ground (0 VDC)
b.	Low Level	4K ohms ± 5% returned to not more than 0.4V
c.	Frequency	1.5 ± 0.3 cps
d.	Duty Cycle	approximately 50% (for reference (only)

3.1.9 Flashing Noun Characters. With the Flasher Timing Pulse specified in paragraph 3.1.8.1 applied to pin 70 of J9 and the Noun numerical characters programmed for 8's (ref. Tables 3-4 and 3-5), the numerical characters shall flash.

3.1.10 Flashing Verb Characters. With the Flasher Timing Pulse specified in paragraph 3.1.8.1 applied to pin 70 of J9 and the Verb numerical characters programmed for 8's (ref. Tables 3-4 and 3-5), the numerical characters shall flash.

TABLE 3-1

KEY DEPRESSED	OUTPUT PINS							
	79	76	77	78	51	49	48	28
KEY REL	1	1	0	0	1	0	0	0
VERB	1	0	0	0	1	0	0	0
NOUN	1	1	1	1	1	0	0	0
ENTR	1	1	1	0	0	0	0	0
CLR	1	1	1	1	0	0	0	0
+	1	1	0	1	0	0	0	0
-	1	1	0	1	1	0	0	0
0	1	0	0	0	0	0	0	0
1	0	0	0	0	1	0	0	0
2	0	0	0	1	0	0	0	0
3	0	0	0	1	1	0	0	0
4	0	0	1	0	0	0	0	0
5	0	0	1	0	1	0	0	0
6	0	0	1	1	0	0	0	0
7	0	0	1	1	1	0	0	0
8	0	1	0	0	0	0	0	0
9	0	1	0	0	1	0	0	0
RSET	1	0	0	1	0	0	1	0
STBY	0	0	0	0	0	1	0	1

NOTE: The figures one and zero used in Table 3-1 represent the logic "one" and "zero" levels specified in paragraphs 3.1.6.1 and 3.1.6.2.

TABLE 3-1

KEY DEPRESSED	OUTPUT PINS							
	79	76	77	78	51	49	48	28
KEY REL	1	1	0	0	1	0	0	0
VERB	1	0	0	0	1	0	0	0
NOUN	1	1	1	1	1	0	0	0
ENTR	1	1	1	0	0	0	0	0
CLR	1	1	1	1	0	0	0	0
+	1	1	0	1	0	0	0	0
-	1	1	0	1	1	0	0	0
0	1	0	0	0	0	0	0	0
1	0	0	0	0	1	0	0	0
2	0	0	0	1	0	0	0	0
3	0	0	0	1	1	0	0	0
4	0	0	1	0	0	0	0	0
5	0	0	1	0	1	0	0	0
6	0	0	1	1	0	0	0	0
7	0	0	1	1	1	0	0	0
8	0	1	0	0	0	0	0	0
9	0	1	0	0	1	0	0	0
RSET	1	0	0	1	0	0	1	0
STBY	0	0	0	0	0	1	0	1

NOTE: The figures one and zero used in Table 3-1 represent the logic "one" and "zero" levels specified in paragrahs 3.1.6.1 and 3.1.6.2.

3.1.11 Status and Caution Indicators. With a logic "one" applied to an input pin of J9 as specified in Table 3-2 and the input voltage set to 5.0 ± 0.1 VDC the corresponding status or caution indicator shall be illuminated at 15 ± 3 Foot-Lamberts. The exception shall be the COMP ACTY indicator, which shall be illuminated at 10 -18 Foot-Lamberts with the 10K ohm potentiometer (ref. paragraph 3.1.4) set to maximum resistance. Also a contact closure shall exist between pins of J9 as specified in Table 3-2.

TABLE 3-2

Logic Input	J9 Input Pin	Indicator Illuminated	Indicator Color (reference only)	Contact Closure Between pins of J9
1	47	UPLINK ACTY	White	
1	25	STBY	White	58 and 35
1	71	TEMP	Yellow	57 and 31
1	44	RESTART	Yellow	57 and 31
1	26	COMP ACTY	Green*	
1	69			37 and 61
1	46	KEY REL	White	
1	18			36 and 60
1	45			55 and 84
1	45			15 and 32
1	27			80 and 81
1	27			57 and 83
1	66			33 and 56
1	72	OPR ERR	White	
0	66			16 and 56
0	44			31 and 53
0	18			36 and 85
0	45			57 and 84
0	45			14 and 32
0	69			19 and 37
0	27			54 and 83
0	27			82 and 81
0	25			59 and 35

*Electroluminescent indicator.

3.1.11 Status and Caution Indicators. With a logic "one" applied to an input pin of J9 as specified in Table 3-2 and the input voltage set to 5.0 ± 0.1 VDC the corresponding status or caution indicator shall be illuminated. The average intensity of the incandescent display shall be 15 ± 3 Foot-Lamberts. The exception shall be the COMP ACTY indicator, which shall be illuminated at an average intensity of 10-24 Foot-Lamberts with the 10K ohm potentiometer (ref. paragraph 3.1.4) set to maximum resistance. Also a contact closure shall exist between pins of J9 as specified in Table 3-2.

TABLE 3-2

Logic Input	J9 Input Pin	Indicator Illuminated	Indicator Color (reference only)	Contact Closure Between pins of J9
1	47	UPLINK ACTY	White	
1	25	STBY	White	58 and 35
1	71	TEMP	Yellow	57 and 31
1	44	RESTART	Yellow	57 and 31
1	26	COMP ACTY	Green*	
1	69			37 and 61
1	46	KEY REL	White	
1	18			36 and 60
1	45			55 and 84
1	45			15 and 32
1	27			80 and 81
1	27			57 and 83
1	66			33 and 56
1	72	OPR ERR	White	
0	66			16 and 56
0	44			31 and 53
0	18			36 and 85
0	45			57 and 84
0	45			14 and 32
0	69			19 and 37
0	27			54 and 83
0	27			82 and 81
0	25			59 and 35

*Electroluminescent indicator.

3.1.11 Status and Caution Indicators. With a logic "one" applied to an input pin of J9 as specified in Table 3-2 and the input voltage set to 5.0 ± 0.1 VDC the corresponding status or caution indicator shall be illuminated. The average intensity of the incandescent display shall be 15 +3 -4 Foot-Lamberts. The exception shall be the COMP ACTY indicator, which shall be illuminated at an average intensity of 10-24 Foot-Lamberts with the 10K ohm potentiometer (ref. paragraph 3.1.4) set to maximum resistance. Also a contact closure shall exist between pins of J9 as specified in Table 3-2.

TABLE 3-2

Logic Input	J9 Input Pin	Indicator Illuminated	Indicator Color (reference only)	Contact Closure Between pins of J9
1	47	UPLINK ACTY	White	
1	25	STBY	White	58 and 35
1	71	TEMP	Yellow	57 and 31
1	44	RESTART	Yellow	57 and 31
1	26	COMP ACTY	Green*	
1	69			37 and 61
1	46	KEY REL	White	
1	18			36 and 60
1	45			55 and 84
1	45			15 and 32
1	27			80 and 81
1	27			57 and 83
1	66			33 and 56
1	72	OPR ERR	White	
0	66			16 and 56
0	44			31 and 53
0	18			36 and 85
0	45			57 and 84
0	45			14 and 32
0	69			19 and 37
0	27			54 and 83
0	27			82 and 81
0	25			59 and 35

*Electroluminescent indicator.

3.1.11 Status and Caution Indicators. With a logic "one" applied to an input pin of J9 as specified in Table 3-2 and the input voltage set to 5.0 ± 0.1 VDC the corresponding status or caution indicator shall be illuminated. The current shall be monitored for each indicator. White shall be 225 ma ± 20%, yellow shall be 180 ma ± 20%. The intensity limit for the Status (white) indicators shall be 8-28 foot-lamberts and the maximum legend intensity shall not exceed the minimum by more than a ratio of 2:1 in a given panel. The intensity for the Caution (yellow) indicators shall be 8-28 foot-lamberts and the maximum legend intensity shall not exceed the minimum by more than a ratio of 2:1 in a given panel. The exception shall be the COMP ACTY Indicator, which shall be illuminated at an average intensity of 10-24 foot-lamberts with the 10K ohm potentiometer (ref. Para. 3.1.4) set to maximum resistance. Also a contact closure shall exist between pins of J9 as specified in Table 3-2.

TABLE 3-2

Logic Input	J9 Input Pin	Indicator Illuminated	Indicator Color (reference only)	Contact Closure Between pins of J9
1	47	UPLINK ACTY	White	
1	25	STBY	White	58 and 35
1	71	TEMP	Yellow	57 and 31
1	44	RESTART	Yellow	57 and 31
1	26	COMP ACTY	Green*	
1	69			37 and 61
1	46	KEY REL	White	
1	18			36 and 60
1	45			55 and 84
1	45			15 and 32
1	27			80 and 81
1	27			57 and 83
1	66			33 and 56
1	72	OPR ERR	White	
0	66			16 and 56
0	44			31 and 53
0	18			36 and 85
0	45			57 and 84
0	45			14 and 32
0	69			19 and 37
0	27			54 and 83
0	27			82 and 81
0	25			59 and 35

*Electroluminescent indicator.

3.1.11.1 Logic Zero Input. With a logic "zero" applied to an input pin of J9 as specified in Table 3-2, contact closure shall exist between pins of J9 as specified in Table 3-2.

3.1.11.2 Logic One and Zero. The logic "ones" and "zeros" referenced in this section shall be as specified in sections 3.1.7.1 and 3.1.7.2.

3.1.12 Isolated Relay Indicators. When programmed for RLYWD 12, and a logic "one" applied to an input pin of J9 as specified in Table 3-3, the corresponding isolated relay indicator shall be illuminated at 15 ± 3 Foot-Lamberts. Also contact closure shall exist between pins of J9 as specified in Table 3-3.

3.1.12.1 Logic Zero Input. With a logic "zero" applied to an input pin of J9 specified in Table 3-3, a contact closure shall exist between pins of J9 as specified in Table 3-3.

TABLE 3-3

Logic Input	J9 Input Pin	Indicator Illuminated	Contact Closure Between Pins
1	41	NO ATT	
1	3	GIMBAL LOCK	57 and 31
1	10		17 and 34
1	23	TRACKER	57 and 31
1	42	PROG	57 and 31
0	10		6 and 34

3.1.12.2 Logic One and Zero. The logic "ones" and "zeros" referenced in this section shall be as specified in sections 3.1.7.1 and 3.1.7.2.

3.1.12.3 RLYWD 12 Input. The RLYWD 12 input shall be applied at the same time the indicator input pins receive a logic input signal. RLYWD 12 shall be a combination of logic "ones" and "zeros" (ref. section 3.1.13.2) applied to the pins of J9 as listed below:

Pins of J9	68	43	24	11
Logic Input	1	1	0	0

3.1.11.1 Logic Zero Input. With a logic "zero" applied to an input pin of J9 as specified in Table 3-2, contact closure shall exist between pins of J9 as specified in Table 3-2.

3.1.11.2 Logic One and Zero. The logic "ones" and "zeros" referenced in this section shall be as specified in sections 3.1.7.1 and 3.1.7.2

3.1.12 Isolated Relay Indicators. When programmed for RLYWD 12, and a logic "one" applied to an input pin of J9 as specified in Table 3-3, the corresponding isolated relay indicator shall be illuminated. The average intensity of the incandescent display shall be 15 ± 3 Foot-Lamberts. Also contact closure shall exist between pins of J9 as specified in Table 3-3.

3.1.12.1 Logic Zero Input. With a logic "zero" applied to an input pin of J9 specified in Table 3-3, a contact closure shall exist between pins of J9 as specified in Table 3-3.

TABLE 3-3

Logic Input	J9 Input Pin	Indicator Illuminated	Contact Closure Between Pins
1	41	NO ATT	
1	3	GIMBAL LOCK	57 and 31
1	10		17 and 34
1	23	TRACKER	57 and 31
1	42	PROG	57 and 31
0	10		6 and 34

3.1.12.2 Logic One and Zero. The logic "ones" and "zeros" referenced in this section shall be as specified in sections 3.1.7.1 and 3.1.7.2.

3.1.12.3 RLYWD 12 Input. The RLYWD 12 input shall be applied at the same time the indicator input pins receive a logic input signal. RLYWD 12 shall be a combination of logic "ones" and "zeros" (ref. section 3.1.13.2) applied to the pins of J9 as listed below:

Pins of J9	68	43	24	11
Logic Input	1	1	0	0

3.1.11.1 Logic Zero Input. With a logic "zero" applied to an input pin of J9 as specified in Table 3-2, contact closure shall exist between pins of J9 as specified in Table 3-2.

3.1.11.2 Logic One and Zero. The logic "ones" and "zeros" referenced in this section shall be as specified in sections 3.1.7.1 and 3.1.7.2

3.1.12 Isolated Relay Indicators. When programmed for RLYWD 12, and a logic "one" applied to an input pin of J9 as specified in Table 3-3, the corresponding isolated relay indicator shall be illuminated. The average intensity of the incandescent display shall be 15 +3 -4 ~~Foot-Lamberts~~. Also contact closure shall exist between pins of J9 as specified in Table 3-3.

3.1.12.1 Logic Zero Input. With a logic "zero" applied to an input pin of J9 specified in Table 3-3, a contact closure shall exist between pins of J9 as specified in Table 3-3.

TABLE 3-3

Logic Input	J9 Input Pin	Indicator Illuminated	Contact Closure Between Pins
1	41	NO ATT	
1	3	GIMBAL LOCK	57 and 31
1	10		17 and 34
1	23	TRACKER	57 and 31
1	42	PROG	57 and 31
0	10		6 and 34

3.1.12.2 Logic One and Zero. The logic "ones" and "zeros" referenced in this section shall be as specified in sections 3.1.7.1 and 3.1.7.2.

3.1.12.3 RLYWD 12 Input. The RLYWD 12 input shall be applied at the same time the indicator input pins receive a logic input signal. RLYWD 12 shall be a combination of logic "ones" and "zeros" (ref. section 3.1.13.2) applied to the pins of J9 as listed below:

Pins of J9	68	43	24	11
Logic Input	1	1	0	0

3.1.11.1 Logic Zero Input. With a logic "zero" applied to an input pin of J9 as specified in Table 3-2, contact closure shall exist between pins of J9 as specified in Table 3-2.

3.1.11.2 Logic One and Zero. The logic "ones" and "zeros" referenced in this section shall be as specified in sections 3.1.7.1 and 3.1.7.2.

3.1.12 Isolated Relay Indicators. When programmed for RLYWD 12, and a logic "one" applied to an input pin of J9 as specified in Table 3-3, the corresponding isolated relay indicator shall be illuminated. The intensity of the Status/Caution Legends and Current measurements shall be as specified in Paragraph 3.1.11. Also contact closure shall exist between pins of J9 as specified in Table 3-3.

3.1.12.1 Logic Zero Input. With a logic "zero" applied to an input pin of J9 specified in Table 3-3, a contact closure shall exist between pins of J9 as specified in Table 3-3.

TABLE 3-3

Logic Input	J9 Input Pin	Indicator Illuminated	Contact Closure Between Pins
1	41	NO ATT	
1	3	GIMBAL LOCK	57 and 31
1	10		17 and 34
1	23	TRACKER	57 and 31
1	42	PROG	57 and 31
0	10		6 and 34

3.1.12.2 Logic One and Zero. The logic "ones" and "zeros" referenced in this section shall be as specified in sections 3.1.7.1 and 3.1.7.2.

3.1.12.3 RLYWD 12 Input. The RLYWD 12 input shall be applied at the same time the indicator input pins receive a logic input signal. RLYWD 12 shall be a combination of logic "ones" and 'zeros" (ref. section 3.1.13.2) applied to the pins of J9 as listed below:

Pins of J9	68	43	24	11
Logic Input	1	1	0	0

3.1.13 Numerical Electroluminescent Indicators. With the 10K potentiometer (ref. paragraph 3.1.4) set to maximum resistance, and the appropriate RLYWD and RLYBT combinations of logic "ones" and "zeros" applied as specified in Tables 3-4 and 3-5, the corresponding Noun, Verb, and Program legend numerical characters and the numerical characters of all registers shall be illuminated at 10-18 Foot-Lamberts.

TABLE 3-4

RLYWD				RLYBT										
Word Bits				Sign Bit	Character 2 Bits					Character 1 Bits				
16	14	13	12	11	10	9	8	7	6	5	4	3	2	1
DSKY INPUT PINS														
68	43	24	11	12	67	42	23	10	3	66	41	22	9	2
1	0	1	1		← PROGRAM CHAR 2 →					← PROGRAM CHAR 1 →				
1	0	1	0		← VERB CHAR 2 →					← VERB CHAR 1 →				
1	0	0	1		← NOUN CHAR 2 →					← NOUN CHAR 1 →				
1	0	0	0							← REG 1 CHAR 5 →				
0	1	1	1	R1(+)	← REG 1 CHAR 4 →					← REG 1 CHAR 3 →				
0	1	1	0	R1(-)	← REG 1 CHAR 2 →					← REG 1 CHAR 1 →				
0	1	0	1	R2(+)	← REG 2 CHAR 5 →					← REG 2 CHAR 4 →				
0	1	0	0	R2(-)	← REG 2 CHAR 3 →					← REG 2 CHAR 2 →				
0	0	1	1		← REG 2 CHAR 1 →					← REG 3 CHAR 5 →				
0	0	1	0	R3(+)	← REG 3 CHAR 4 →					← REG 3 CHAR 3 →				
0	0	0	1	R3(-)	← REG 3 CHAR 2 →					← REG 3 CHAR 1 →				

3.1.13.1 With the numerical electroluminescent characters programmed for 8's (ref. Tables 3-4 and 3-5) and the 10K ohm potentiometer set to minimum resistance all numerical electroluminescent indicators shall be OFF.

TABLE 3-5

Numerical Displays	Character Bits				
	10 or 5	9 or 4	8 or 3	7 or 2	6 or 1
Blank	0	0	0	0	0
0	1	0	1	0	1
1	0	0	0	1	1
2	1	1	0	0	1
3	1	1	0	1	1
4	0	1	1	1	1
5	1	1	1	1	0
6	1	1	1	0	0
7	1	0	0	1	1
8	1	1	1	0	1
9	1	1	1	1	1

3.1.13.2 For clarification, an example in the use of Tables 3-4 and 3-5 is given below:

EXAMPLE:

Problem: Program the numeral 1 into Character 2 of the Program legend.

Explanation: The appropriate RLYWD and its input pins Character 2 input pins are obtained from Table 3-4. The numerical logic input is obtained from Table 3-5. The input pins and logic input are as follows:

RLYWD				RLYBT				
Word Bits				Character Bits				
16	14	13	12	10	9	8	7	6
J9 Input Pins								
68	43	23	11	67	42	23	10	3
Logic Input								
1	0	1	1	0	0	0	1	1

3.1.13.3 Logic One and Zero. The logic "ones" and "zeros" referenced in this section shall be as specified in paragraphs 3.1.7.1 and 3.1.7.2.

3.1.14 Thermal Cycle Extremes and Marginal Voltages:

3.1.14.1 Thermal Cycle. The assembly shall be subjected to the thermal cycle specified below. Dynamic tests shall be performed during the last two thermal extremes as specified in paragraphs 3.1.14.2 thru 3.1.14.4.

a. Set ambient temperature to $0^{o}C\ ^{+0C^{o}}_{-2.8C^{o}}$ for 8 ± 1 hours.

b. Increase the ambient temperature to $65^{o}C\ ^{+2.8C^{o}}_{-0C^{o}}$ in not less than 40 minutes. This temperatufe shall be maintained for 3 hours.

c. Decrease the ambient temperature to $0^{o}C\ ^{+0C^{o}}_{-2.8C^{o}}$ in not less than 40 minutes. This temperature shall be maintained for 1.5 hours.

d. Increase the ambient temperature to $65^{o}C\ ^{+2.8C^{o}}_{-0C^{o}}$ in not less than 40 minutes. This temperature shall be maintained for 1.5 hours.

e. Decrease the ambient temperature to $0^{o}C\ ^{+0C^{o}}_{-2.8C^{o}}$ in not less than 40 minutes. This temperature shall be maintained for 1.5 hours.

f. Increase the ambient temperature to $65^{o}C\ ^{+2.8C^{o}}_{-0C^{o}}$ in not less than 40 minutes. This temperature shall be maintained for 1.5 hours.

3.1.14.2 Low Marginal Voltages/Low Temperature. The assembly shall perform as specified in paragraphs 3.1.4 and 3.1.6 thru 3.1.13 when the 28.0V supply is set to 20.0 ± 0.1 VDC, and the 14V supply is set to 12.2 ± 0.1 VDC, while the ambient temperature is maintained at $0^{o}C\ ^{+0C^{o}}_{-2.8C^{o}}$.

3.1.13.3 Logic One and Zero. The logic "ones" and "zeros" referenced in this section shall be as specified in paragraphs 3.1.7.1 and 3.1.7.2.

3.2 PRODUCT CONFIGURATION

3.2.1 Drawings. The configuration of the assembly shall be in accordance with Apollo G&N Drawing 2003994 and all drawings and engineering data referenced thereon.

4. QUALITY ASSURANCE PROVISIONS

4.1 GENERAL. The contractor responsible for the manufacture of the assembly shall be responsible for the accomplishment of each test required herein. See Table 4-1, Product Performance and Configuration Requirement/Quality Verification Cross Reference Index.

TABLE 4-1

Requirement	Verification	Requirement	Verification
3.1.1	4.2.2	3.1.11	4.2.14
3.1.2	4.2.3	3.1.11.1	4.2.14.1
3.1.3.2	4.2.4.1	3.1.12	4.2.15
3.1.3.2	4.2.4.2	3.1.12.1	4.2.15.1
3.1.3.2	4.2.4.3	3.1.13	4.2.16
3.1.3.3	4.2.5	3.1.13.1	4.2.16.1
3.1.3.4	4.2.4.4		
3.1.4	4.2.7		
3.1.5	4.2.8		
3.1.6	4.2.9		
3.1.7	4.2.10		
3.1.8	4.2.11		
3.1.9	4.2.12		
3.1.10	4.2.13		

3.1.13.3 Logic One and Zero. The logic "ones" and "zeros" referenced in this section shall be as specified in paragraphs 3.1.7.1 and 3.1.7.2.

3.2 PRODUCT CONFIGURATION

3.2.1 Drawings. The configuration of the assembly shall be in accordance with Apollo G&N Drawing 2003994 and all drawings and engineering data referenced thereon.

4. QUALITY ASSURANCE PROVISIONS

4.1 GENERAL. The contractor responsible for the manufacture of the assembly shall be responsible for the accomplishment of each test required herein. See Table 4-1, Product Performance and Configuration Requirement/Quality Verification Cross Reference Index.

TABLE 4-1

Requirement	Verification	Requirement	Verification
3.1.1	4.2.2	3.1.11	4.2.14,4.2.6, 4.2.4.3
3.1.2	4.2.3	3.1.11.1	4.2.14.1
3.1.3.2	4.2.4.1	3.1.12	4.2.15,4.2.6, 4.2.4.3
3.1.3.2	4.2.4.2	3.1.12.1	4.2.15.1
3.1.3.2	4.2.4.3	3.1.13	4.2.16,4.2.6
3.1.3.3	4.2.5	3.1.13.1	4.2.16.1
3.1.3.4	4.2.4.4		
3.1.4	4.2.7,4.2.6		
3.1.5	4.2.8,4.2.6		
3.1.6	4.2.9		
3.1.7	4.2.10		
3.1.8	4.2.11		
3.1.9	4.2.12		
3.1.10	4.2.13		

3.1.14.3 Low Marginal Voltages/High Temperature. The assembly shall perform as specified in paragraphs 3.1.4 and 3.1.6 thru 3.1.13 when the 28V supply is set to 20.0 ± 0.1 VDC, and the 14V supply is set to 12.2 ± 0.1 VDC, while the ambient temperature is maintained at 65°C $^{+2.8C^{o}}_{-0C^{o}}$.

3.1.14.4 High Marginal Voltages/High Temperature. The assembly shall perform as specified in paragraphs 3.1.4 and 3.1.6 thru 3.1.13 when the 28.0V supply is set to 32.0 ± 0.1 VDC, and the 14V supply is set to 10.0 ± 0.1 VDC, while the ambient temperature is maintained at 65°C $^{+2.8C^{o}}_{-0C^{o}}$.

During marginal voltage and thermal extremes, no light intensity limits shall apply. Visual indication will insure system operation. The Keyboard shall not be energized at high thermal limits.

3.1.15 Vibration. The assembly shall perform as specified in paragraph 3.1.4 thru 3.1.13 after being subjected to the vibration limits specified below:

a.	Frequency Range	10 to 2000 to 10 cps
b.	Frequency Sweep Rate	at a logarithmic rate of one minute per octave
c.	Velocity	1.83 ± 10% inches per second in the frequency range of 10 to 100 cps
d.	Acceleration	3 g's ± 10% peak in the frequency range of 100 to 2000 cps
e.	Planes	each of the three mutually perpendicular axes.

3.1.15.1 Switch Chatter. During vibration there shall be no evidence of Keyboard switch chatter as specified below:

Key Lines - No contact closures of more than 50 usec duration.

Key Reset - No contact opens of more than 50 usec duration.

4.1.1 Test Conditions

4.1.1.1 Environmental. The assembly shall be tested under the following ambient conditions:

a. Temperature: 25° ± 10°C
b. Relative Humidity: 90% max
c. Barometric Pressure: 28 to 32 inches of Hg

4.1.1.2 Assembly Case Ground. The dynamic tests specified in paragraphs 4.2.6 and 4.2.16 shall be conducted with pins 8 and 39 of J9 connected to ground (0 VDC).

4.1.2 Nonconforming Units. Failure of the unit to pass any examination or test of this specification shall automatically classify the unit as nonconforming. Each nonconforming unit corrected by the contractor shall be reinspected. Reinspection may be limited to the test or examination which defined the nonconformance, or, when directed by the cognizant inspector, a complete retest and re-examination may be required. Nonconforming units which have not been corrected will be considered for acceptance only upon formal application by the contractor to the cognizant NASA representative.

4.2 TESTS

4.2.1 Drawing Compliance. The assembly shall be visually examined for compliance to the requirements of APOLLO G&N Drawing 2003994. Particular attention shall be given to inspection for damage to surfaces, structure, and equipment, including contaminants, pin misalignment, and legibility and appearance of marking.

4.2.2 Continuity. Verify that the resistance between pin 39 of J9 and the assembly housing is in accordance with paragraph 3.1.1.

4.2.3 Insulation Resistance. Remove all lights and modules except Keyboard from assembly. Using test equipment with a test potential of 50 VDC limited to a short circuit current of 50 microamperes, measure the resistance between pin 39 of J9 and all other pins of J9 connected together. Verify that the resistance complies with that specified in paragraph 3.1.2.

3.1.16 Leak Rate. With the assembly pressurized to 2 psig at 70°F using a mixture of 90% nitrogen and 10% helium, the leak rate shall not exceed 1.0 x 10^{-4} cc/atm/sec.

3.2 PRODUCT CONFIGURATION

3.2.1 Drawings. The configuration of the assembly shall be in accordance with Apollo G&N Drawing 2003994 and all drawings and engineering data referenced thereon.

3.2.2 Weight. The assembly shall weigh not more than 17.5 pounds.

4. QUALITY ASSURANCE PROVISIONS

4.1 GENERAL. The contractor responsible for the manufacture of the assembly shall be responsible for the accomplishment of each test required herein. See Table 4-1, Product Performance and Configuration Requirement/Quality Verification Cross Reference Index.

TABLE 4-1

Requirement	Verification	Requirement	Verification
3.1.1	4.2.2	3.1.11	4.2.14
3.1.2	4.2.3	3.1.11.1	4.2.14.1
3.1.3.2	4.2.4.1	3.1.12	4.2.15
3.1.3.2	4.2.4.2	3.1.12.1	4.2.15.1
3.1.3.2	4.2.4.3	3.1.13	4.2.16
3.1.3.3	4.2.5	3.1.13.1	4.2.16.1
3.1.3.4	4.2.4.4	3.1.14.1	4.3.1.1
3.1.4	4.2.7	3.1.14.2	4.3.1.2
3.1.5	4.2.8	3.1.14.3	4.3.1.3
3.1.6	4.2.9	3.1.14.4	4.3.1.4
3.1.7	4.2.10	3.1.15	4.3.2
3.1.8	4.2.11	3.1.15.1	4.3.2.1
3.1.9	4.2.12	3.1.16	4.3.3
3.1.10	4.2.13	3.2.2	4.3.4

3.1.16 Leak Rate. With the assembly pressurized to 2 psig at 25°C ± 2°C using a mixture of 90% nitrogen and 10% helium, the leak rate shall not exceed 1.0 x 10^{-4} cc/sec/atm.

3.2 PRODUCT CONFIGURATION

3.2.1 Drawings. The configuration of the assembly shall be in accordance with Apollo G&N Drawing 2003994 and all drawings and engineering data referenced thereon.

3.2.2 Weight. The assembly weight shall be recorded.

4. QUALITY ASSURANCE PROVISIONS

4.1 GENERAL. The contractor responsible for the manufacture of the assembly shall be responsible for the accomplishment of each test required herein. See Table 4-1, Product Performance and Configuration Requirement/Quality Verification Cross Reference Index.

TABLE 4-1

Requirement	Verification	Requirement	Verification
3.1.1	4.2.2	3.1.11	4.2.14
3.1.2	4.2.3	3.1.11.1	4.2.14.1
3.1.3.2	4.2.4.1	3.1.12	4.2.15
3.1.3.2	4.2.4.2	3.1.12.1	4.2.15.1
3.1.3.2	4.2.4.3	3.1.13	4.2.16
3.1.3.3	4.2.5	3.1.13.1	4.2.16.1
3.1.3.4	4.2.4.4	3.1.14.1	4.3.1.1
3.1.4	4.2.7	3.1.14.2	4.3.1.2
3.1.5	4.2.8	3.1.14.3	4.3.1.3
3.1.6	4.2.9	3.1.14.4	4.3.1.4
3.1.7	4.2.10	3.1.15	4.3.2
3.1.8	4.2.11	3.1.15.1	4.3.2.1
3.1.9	4.2.12	3.1.16	4.3.3
3.1.10	4.2.13	3.2.2	4.3.4

4.2.4 Input Requirements. All tests shall be performed with the input requirements specified in paragraph 3.1.3 applied, when required to the pins of J9 as detailed below:

4.2.4.1 14V Supply. The 14 VDC Supply shall be applied to pin 1 with pin 8 used as the DC return.

4.2.4.2 28V Supply. The 28 VDC Supply shall be applied to pins 21 and 30 with pin 8 used as the DC return.

4.2.4.3 5V Supply. The 5 VDC Supply shall be applied to pins 62 and 64 with pins 63 and 65 used as the DC return.

4.2.4.4 Input Sync Pulse. The Input Sync Pulse specified in paragraph 3.1.3.4 shall be applied to pin 7.

4.2.5 115V Supply. The 115 VRM Supply shall be applied to pin 38 with pin 40 used as the AC return.

4.2.6 Intensity Measurements. Display indicator intensity measurements shall be calculated in the following manner:

a. Electroluminescent Displays - intensity measurements shall be the average of six sample locations.

b. Incandescent Displays - intensity measurements shall be the average of six sample locations at least 1/8 inch in from the illuminated segment border.

c. Push Switches - intensity measurements shall be the average of a single centrally located reading for each of the push switches.

Display indicators shall be visually inspected for abnormal dark spots and light intensity variations.

4.2.7 Legend Illumination. Apply all inputs specified in paragraph 4.2.4. Vary the 10K ohm potentiometer from minimum to maximum resistance and verify that the brightness of the legends shall be as specified in paragraph 3.1.4.

4.2.4 Input Requirements. All tests shall be performed with the input requirements specified in paragraph 3.1.3 applied, when required to the pins of J9 as detailed below:

4.2.4.1 14V Supply. The 14 VDC Supply shall be applied to pin 1 with pin 8 used as the DC return.

4.2.4.2 28V Supply. The 28 VDC Supply shall be applied to pins 21 and 30 with pin 8 used as the DC return.

4.2.4.3 5V Supply. The 5 VDC Supply shall be applied to pins 62 and 64 with pins 63 and 65 used as the DC return.

4.2.4.4 Input Sync Pulse. The Input Sync Pulse specified in paragraph 3.1.3.4 shall be applied to pin 7.

4.2.5 115V Supply. The 115 VRM Supply shall be applied to pin 38 with pin 40 used as the AC return.

4.2.6 Intensity Measurements. Display indicator intensity measurements shall be calculated in the following manner, with no individual readings greater than 25% from the spec limit for the average.

a. Electroluminescent Displays - intensity measurements shall be the average of six sample segments, with the exception of COMP ACTY which is to be measured and recorded as an individual segment. See paragraph 4.2.7, 4.2.14 and 4.2.16.

b. Incandescent Displays - intensity measurements shall be the average of six sample legends at least 1/8 inch in from the illuminated legend border. See paragraphs 4.2.14 and 4.2.15.

c. Push Switches - intensity measurements shall be the average of a single centrally located reading for each of the push switches. See paragraph 4.2.8

Display indicators shall be visually inspected for abnormal dark spots and light intensity variations.

4.2.7 Legend Illumination. Apply all inputs specified in paragraph 4.2.4. Vary the 10K ohm potentiometer from minimum to maximum resistance and verify the intensity of the segments as specified in paragraph 3.1.4. See paragraph 4.2.6.a.

4.2.4 Input Requirements. All tests shall be performed with the input requirements specified in paragraph 3.1.3 applied, when required to the pins of J9 as detailed below:

4.2.4.1 14V Supply. The 14 VDC Supply shall be applied to pin 1 with pin 8 used as the DC return.

4.2.4.2 28V Supply. The 28 VDC Supply shall be applied to pins 21 and 30 with pin 8 used as the DC return.

4.2.4.3 5V Supply. The 5 VDC Supply shall be applied to pins 62 and 64 with pins 63 and 65 used as the DC return. Current shall be measured as specified in Paragraphs 3.1.11 and 3.1.12.

4.2.4.4 Input Sync Pulse. The Input Sync Pulse specified in paragraph 3.1.3.4 shall be applied to pin 7.

4.2.5 115V Supply. The 115 VRM Supply shall be applied to pin 38 with pin 40 used as the AC return.

4.2.6 Intensity Measurements. Display indicator intensity measurements shall be calculated in the following manner, with no individual readings greater than 25% from the spec limit for the average of the electroluminescent displays and push switches.

a. Electroluminescent Displays - intensity measurements shall be the average of six sample segments, with the exception of COMP ACTY which is to be measured and recorded as an individual segment. See paragraphs 4.2.7, 4.2.14 and 4.2.16.

b. Incandescent Displays - intensity measurements shall be made on all legends at least 1/8 inch in from the illuminated legend border. See paragraphs 4.2.14 and 4.2.15.

c. Push Switches - intensity measurements shall be the average of a single centrally located reading for each of the push switches. See paragraph 4.2.8.

Display indicators shall be visually inspected for abnormal dark spots and light intensity variations.

4.2.7 Legend Illumination. Apply all inputs specified in paragraph 4.2.4. Vary the 10K ohm potentiometer from minimum to maximum resistance and verify the intensity of the segments as specified in paragraph 3.1.4. See paragraph 4.2.6a.

4.1.1 Test Conditions

4.1.1.1 Environmental. The assembly shall be tested under the following ambient conditions:

a. Temperature: 25° ± 10°C
b. Relative Humidity: 90% max
c. Barometric Pressure: 28 to 32 inches of Hg

4.1.1.2 Assembly Case Ground. The dynamic tests specified in paragraphs 4.2.6 and 4.2.16 shall be conducted with pins 8 and 39 of J9 connected to ground (0 VDC).

4.1.2 Nonconforming Units. Failure of the unit to pass any examination or test of this specification shall automatically classify the unit as nonconforming. Each nonconforming unit corrected by the contractor shall be reinspected. Reinspection may be limited to the test or examination which defined the nonconformance, or, when directed by the cognizant inspector, a complete retest and re-examination may be required. Nonconforming units which have not been corrected will be considered for acceptance only upon formal application by the contractor to the cognizant NASA representative.

4.2 TESTS

4.2.1 Drawing Compliance. The assembly shall be visually examined for compliance to the requirements of APOLLO G&N Drawing 2003994. Particular attention shall be given to inspection for damage to surfaces, structure, and equipment, including contaminants, pin misalignment, and legibility and appearance of marking.

4.2.2 Continuity. Verify that the resistance between pin 39 of J9 and the assembly housing is in accordance with paragraph 3.1.1.

4.2.3 Insulation Resistance. Remove all lights and modules except Keyboard from assembly. Using test equipment with a test potential of 50 VDC limited to a short circuit current of 50 microamperes, measure the resistance between pin 39 of J9 and all other pins of J9 connected together. Verify that the resistance complies with that specified in paragraph 3.1.2.

4.2.8 Keyboard Illumination. Apply the voltage specified in paragraph 4.2.5, and set the 115V Supply as described in paragraph 3.1.5. Verify that the Keyboard keys are illuminated as specified in paragraph 3.1.5.

4.2.9 Keyboard Outputs. Apply all inputs specified in section 4.2.4. Depress each Keyboard key individually and verify that the outputs, monitored at the output pins, are as specified in paragraph 3.1.6.

4.2.9.1 Keyboard Loads. Each Keyboard output pin listed in Table 3-1 shall be loaded with a 20K ohm ± 5% resistance to ground (0 VDC).

4.2.10 Incandescent Indicators. Apply all inputs specified in paragraph 4.2.4. Apply the logic input as specified in paragraph 3.1.7 and verify that all incandescent indicators are OFF.

4.2.11 Flashing Alarm Characters. Apply all inputs specified in paragraph 4.2.4. Apply the Flasher Timing Pulse as specified in paragraph 3.1.8 and verify that the alarm indicators KEY REL and OPR ERR flash in accordance with paragraph 3.1.8.

4.2.12 Flashing Noun Characters. Apply all inputs specified in paragraph 4.2.4. Apply the Flasher Timing Pulse and logic inputs specified in paragraph 3.1.9. Verify that the Noun numerical characters flash in accordance with paragraph 3.1.9.

4.2.13 Flashing Verb Characters. Apply all inputs specified in paragraph 4.2.4. Apply the Flasher Timing Pulse and logic inputs specified in paragraph 3.1.10. Verify that the Verb numerical characters flash in accordance with paragraph 3.1.10.

4.2.14 Status and Caution Indicators. Apply all inputs specified in paragraph 4.2.4. Apply logic "ones" (ref. para. 3.1.11.2) as specified in paragraph 3.1.11. Verify that the contact closures between the pins listed in Table 3-2, and the status and caution indicators are illuminated in accordance with paragraph 3.1.11.

4.2.14.1 Logic Zero Input. Apply all inputs specified in paragraph 4.2.4. Apply logic "zeros" (ref. para. 3.1.11.2) as specified in paragraph 3.1.11.1. Verify that the contact closures between the pins listed in Table 3-2 are in accordance with paragraph 3.1.11.1.

4.2.4 Input Requirements. All tests shall be performed with the input requirements specified in paragraph 3.1.3 applied, when required to the pins of J9 as detailed below:

4.2.4.1 14V Supply. The 14 VDC Supply shall be applied to pin 1 with pin 8 used as the DC return.

4.2.4.2 28V Supply. The 28 VDC Supply shall be applied to pins 21 and 30 with pin 8 used as the DC return.

4.2.4.3 5V Supply. The 5 VDC Supply shall be applied to pins 62 and 64 with pins 63 and 65 used as the DC return.

4.2.4.4 Input Sync Pulse. The Input Sync Pulse specified in paragraph 3.1.3.4 shall be applied to pin 7.

4.2.5 115V Supply. The 115 VRM Supply shall be applied to pin 38 with pin 40 used as the AC return.

4.2.6 Intensity Measurements. Display indicator intensity measurements shall be calculated in the following manner:

a. Electroluminescent Displays - intensity measurements shall be the average of six sample locations.

b. Incandescent Displays - intensity measurements shall be the average of six sample locations at least 1/8 inch in from the illuminated segment border.

c. Push Switches - intensity measurements shall be the average of a single centrally located reading for each of the push switches.

Display indicators shall be visually inspected for abnormal dark spots and light intensity variations.

4.2.7 Legend Illumination. Apply all inputs specified in paragraph 4.2.4. Vary the 10K ohm potentiometer from minimum to maximum resistance and verify that the brightness of the legends shall be as specified in paragraph 3.1.4.

4.2.14.2 Logic Input. Only one logic input shall be applied at any one time.

4.2.15 Isolated Relay Indicators. Apply all inputs specified in paragraph 4.2.2. Apply RLYWD 12 (ref. para. 3.1.12.3) and logic "ones" (ref. para. 3.1.12.2) as specified in paragraph 3.1.12. Verify that the contact closures between the pins listed in Table 3-3, and the isolated relay indicators are illuminated in accordance with paragraph 3.1.12.

4.2.15.1 Logic Zero Input. Apply all inputs specified in paragraph 4.2.4. Apply logic "zeros" (ref. para. 3.1.12.3) as specified in paragraph 3.1.12.1. Verify that the contact closures between the pins listed in Table 3-3 are in accordance with paragraph 3.1.12.1.

4.2.15.2 Logic Inputs. Only one logic input shall be applied at any one time.

4.2.16 Numerical Electroluminescent Indicators. Apply all inputs specified in section 4.2.4. Set the 10K ohm potentiometer for maximum resistance. Apply the appropriate RLYWD and RLYBT combinations specified in Table 3-4 and 3-5, and verify that the specified numerical electroluminescent indicators are illuminated in accordance with paragraph 3.1.13.

4.2.16.1 Apply all inputs specified in paragraph 4.2.4. Set the 10K ohm potentiometer to minimum resistance. Program numerical electroluminescent indicators as specified in paragraph 3.1.13.1. Verify that the numerical electroluminescent indicators shall be OFF.

5. PREPARATION FOR DELIVERY

5.1 GENERAL. Preparation for delivery shall be in accordance with Specification ND 1002214. The assembly shall be pressurized to .7 to 1.5 psig.

6. NOTES: None.

4.2.14.2 Logic Input. Only one logic input shall be applied at any one time.

4.2.15 Isolated Relay Indicators. Apply all inputs specified in paragraph 4.2.2. Apply RLYWD 12 (ref. para. 3.1.12.3) and logic "ones" (ref. para. 3.1.12.2) as specified in paragraph 3.1.12. Verify that the contact closures between the pins listed in Table 3-3, and the isolated relay indicators are illuminated in accordance with paragraph 3.1.12. See paragraph 4.2.6b.

4.2.15.1 Logic Zero Input. Apply all inputs specified in paragraph 4.2.4. Apply logic "zeros" (ref. para. 3.1.12.3) as specified in paragraph 3.1.12.1. Verify that the contact closures between the pins listed in Table 3-3 are in accordance with paragraph 3.1.12.1.

4.2.15.2 Logic Inputs. Only one logic input shall be applied at any one time.

4.2.16 Numerical Electroluminescent Indicators. Apply all inputs specified in section 4.2.4. Set the 10K ohm potentiometer for maximum resistance. Apply the appropriate RLYWD and RLYBT combinations specified in Table 3-4 and 3-5, and verify that the specified numerical electroluminescent indicators are illuminated in accordance with paragraph 3.1.13. See paragraph 4.2.6a.

4.2.16.1 Apply all inputs specified in paragraph 4.2.4. Set the 10K ohm potentiometer to minimum resistance. Program numerical electroluminescent indicators as specified in paragraph 3.1.13.1. Verify that the numerical electroluminescent indicators shall be OFF.

5. PREPARATION FOR DELIVERY

5.1 GENERAL. Preparation for delivery shall be in accordance with Specification ND 1002214. The assembly shall be pressurized to .7 to 1.5 psig.

6. NOTES: None.

4.3.1.3 Low Marginal Voltages/High Temperature. Set the input supply voltage and the ambient temperature to the limits specified in paragraph 3.1.14.3. Verify that the module shall perform in accordance with paragraph 3.1.14.3.

4.3.1.4 High Marginal Voltages/High Temperature. Set the input supply voltage and the ambient temperature to the limits specified in paragraph 3.1.14.4. Verify that the module shall perform in accordance with paragraph 3.1.14.4.

The DSKY shall be subjected to the designated temperatures for one-half hour prior to performing any electrical tests.

This test may be performed with a set of test display indicators. Original assembly indicators will be reinstalled in the DSKY after completion of this test.

4.3.2 Vibration. Subject the assembly to the vibration specified in paragraph 3.1.15. Verify that the assembly performs in accordance with paragraph 3.1.15.

4.3.2.1 Switch Chatter. Verify that there is no keyboard switch chatter as specified in paragraph 3.1.15.1.

4.3.3 Leak Rate. Pressurize the assembly to 2 psig at 25°C ± 10C° using the mixture specified in paragraph 3.1.16. After pressurization place assembly in a vacuum, and verify that the leak rate does not exceed that specified in paragraph 3.1.16 when measured at 25°C ± 10C°.

4.3.4 Weight. Weigh the assembly to the nearest .01 pound. Verify that the weight is in accordance with paragraph 3.2.2.

5. PREPARATION FOR DELIVERY

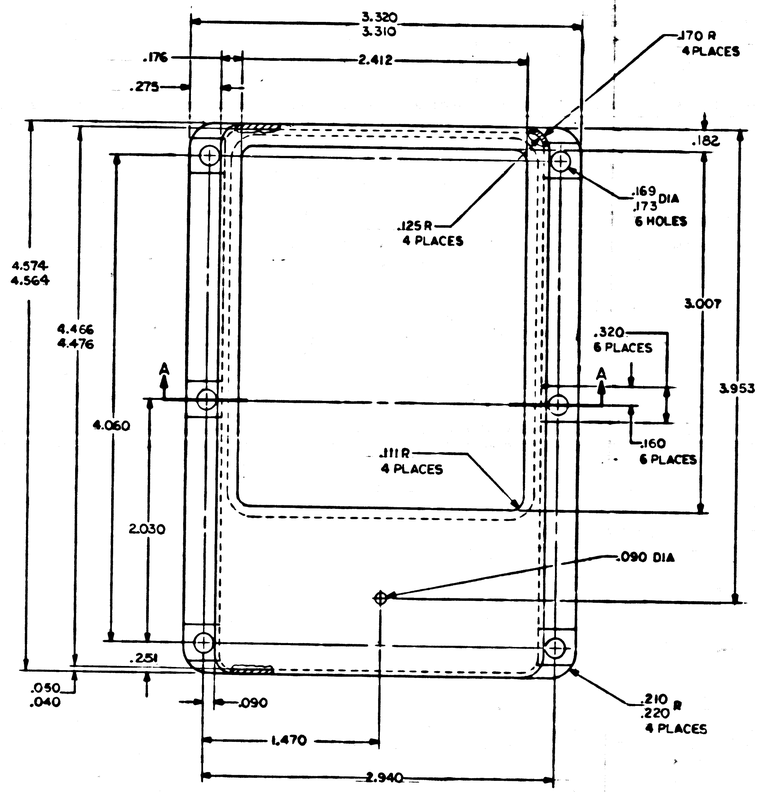
5.1 GENERAL. Preparation for delivery shall be in accordance with Specification ND 1002214. The assembly shall be pressurized to .7 to 1.5 psig.

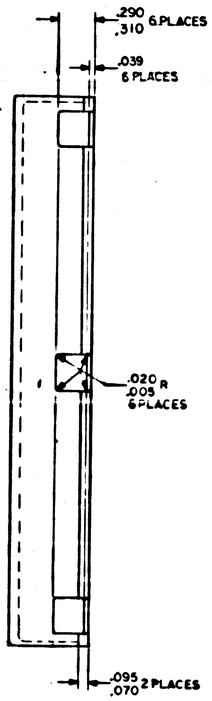
6. NOTES: None.

NOTICE - WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS, OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

REVISIONS TRW 25062

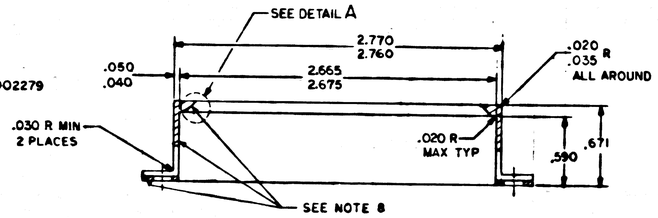
SYM	ZONE	DESCRIPTION	DR	CHK	DATE	APPROVED



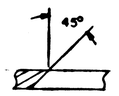


NOTES

1. MATL: 6061 AL PER QQ-A-250
2. REMOVE BURRS AND SHARP EDGES .005/.015 EXCEPT AS NOTED
3. CHROMATE PER MIL-C-5541, TYPE II, GRADE C, CLASS B
4. PAINT WITH 1008809-1 DARK GRAY EPOXY ENAMEL EXTERNAL SURFACES ONLY PER ND1002279
5. ALL SURFACES 125
6. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
7. FINAL COAT EXTERNAL SURFACES PER ND1002277 USING 1012543-003
8. DO NOT PAINT ALL INSIDE AND BOTTOM SURFACES SHOWN
9. IDENTIFY WITH PART NO. PER ND1002019
10. FINAL MATL CONDITION TO BE TEMP T6, HEAT TREAT PER MIL-H-6088



SECTION A-B



DETAIL A
SCALE 4/1

QTY REQD	PART OR IDENTIFYING NO.	MATERIAL OR NOTES	NOMENCLATURE OR DESCRIPTION	FIND NO.
			LIST OF MATERIALS	

2003897	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
CAPACITOR VALUES ARE IN μf
RESISTOR VALUES ARE IN OHMS
TOLERANCES ON
FRACTIONS DECIMALS ANGLES
± ±.005 ± 2°
DO NOT SCALE THIS DRAWING

MATERIAL
SEE NOTE 1&10

MIT INSTRUMENTATION LAB
CAMBRIDGE MASS

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

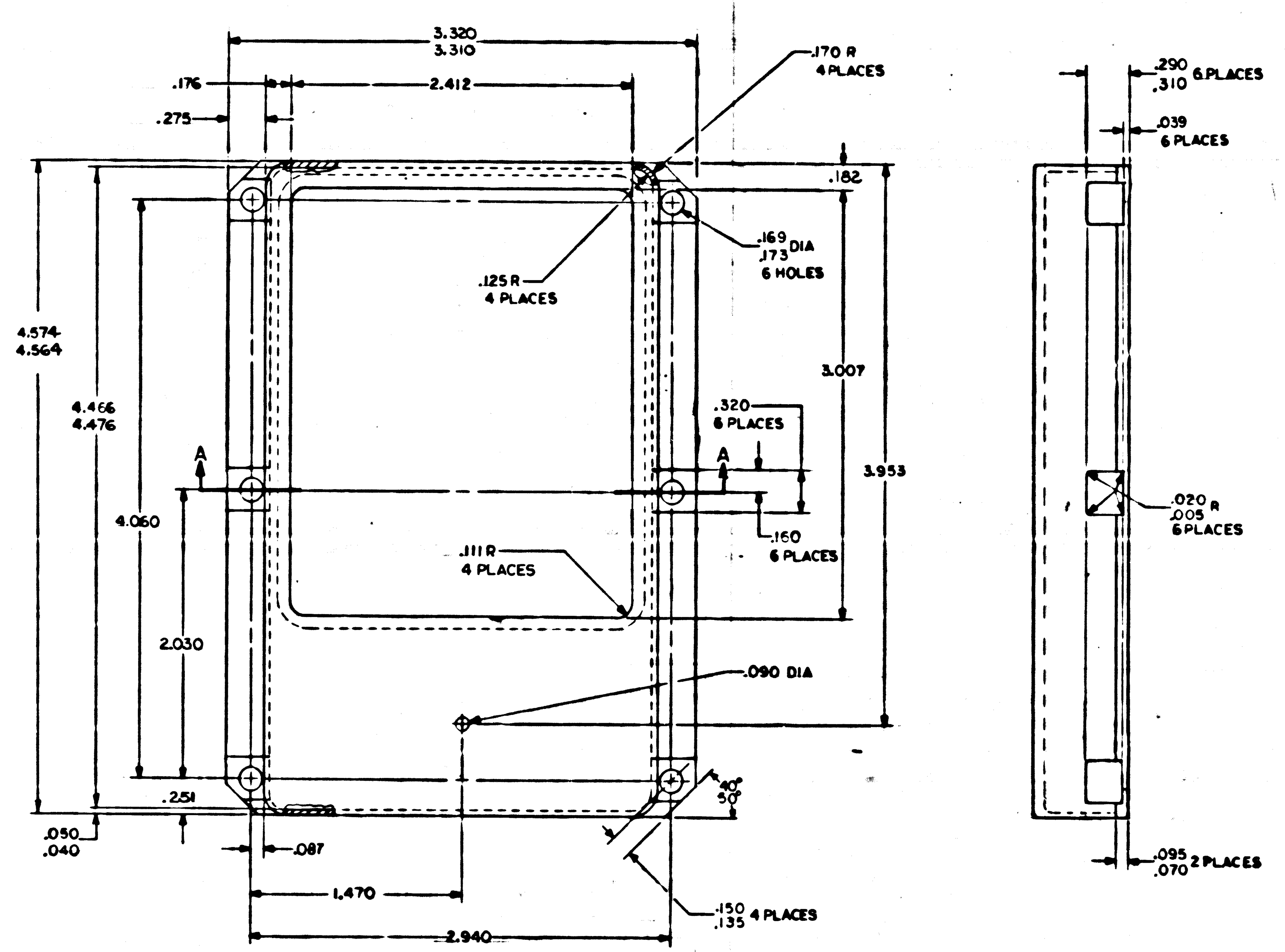
DRAWN	L.P. Lamond	2 May 67
CHECKED	L. Hutton	4 May 67
APPROVED	Eldon C. Hall	7 March 67
APPROVED	W. Stameris	8 Mar 67
COGNIZANT ENGR		
APPROVED	E. Apt	3/9/67
APPROVED MSC		DATE

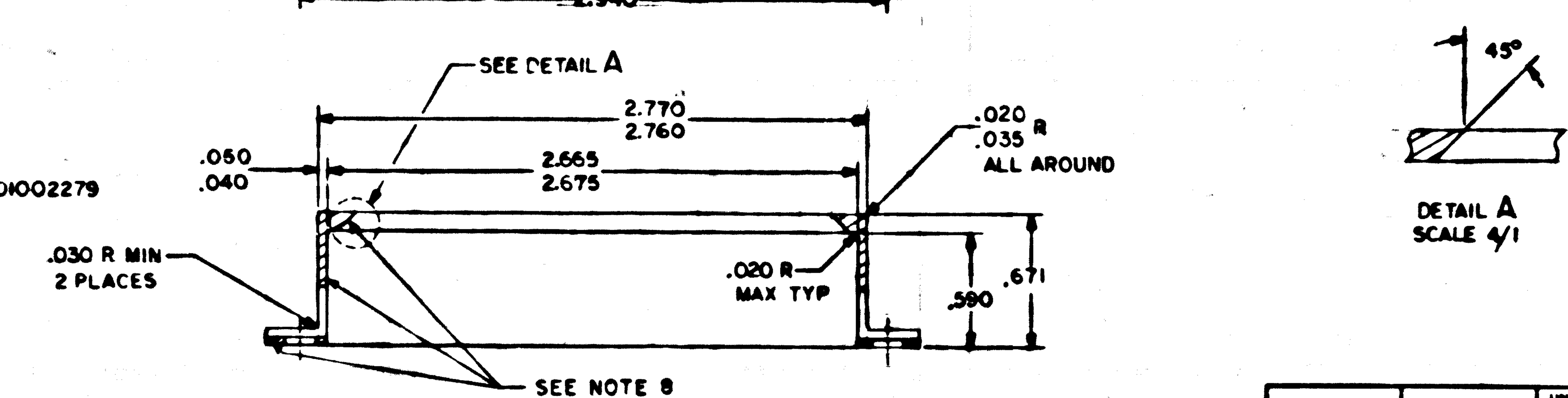
FRAME, INDICATOR COVER
AGC DSKY

CODE IDENT NO	SIZE	DRAWING NO.
80230	D	2004699
SCALE 2/1		SHEET 1 OF 1

2004699 -

SYM	ZONE	REVISIONS DESCRIPTION	DR	CHK	DATE	APPROVED
A		CHANGED PER TDRR 35188				





SECTION A-A

DETAIL A
SCALE 4/1

NOTES

1. MAT'L: 6061 AL PER QQ-A-250
2. REMOVE BURRS AND SHARP EDGES .005/.015 EXCEPT AS NOTED
3. CHROMATE PER MIL-C-5541, TYPE II, GRADE C, CLASS B
4. PAINT WITH 1008809-1 DARK GRAY EPOXY ENAMEL EXTERNAL SURFACES ONLY PER ND1002279
5. ALL SURFACES 125√
6. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
7. FINAL COAT EXTERNAL SURFACES PER ND1002277 USING 1012543-003
8. DO NOT PAINT ALL INSIDE AND BOTTOM SURFACES SHOWN
9. IDENTIFY WITH PART NO. PER ND1002019
10. FINAL MAT'L CONDITION TO BE TEMP T6. HEAT TREAT PER MIL-H-6088

QTY REQD	PART OR IDENTIFYING NO.	MATERIAL OR NOTES	NOMENCLATURE OR DESCRIPTION	FIND NO

LIST OF MATERIALS

NEXT ASSY	USED ON
2003897	

APPLICATION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
CAPACITOR VALUES ARE IN μf
RESISTOR VALUES ARE IN OHMS
TOLERANCES ON FRACTIONS ± DECIMALS ±.005 ANGLES ± 2°
DO NOT SCALE THIS DRAWING

MATERIAL: SEE NOTE 1&10

MIT INSTRUMENTATION LAB
CAMBRIDGE, MASS.

DRAWN / CHECKED / APPROVED / APPROVED / APPROVED / APPROVED MSC — DATE

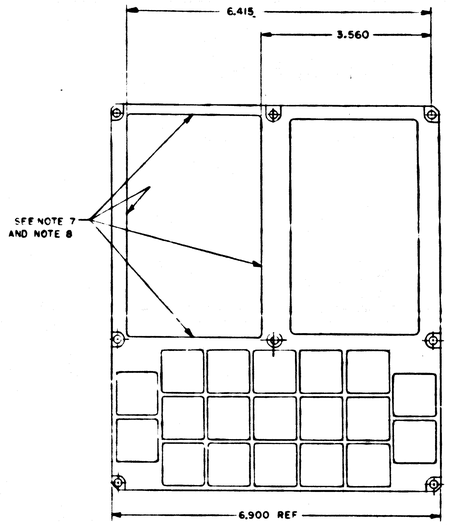
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

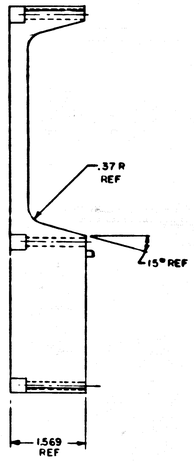
FRAME, INDICATOR COVER
AGC DSKY

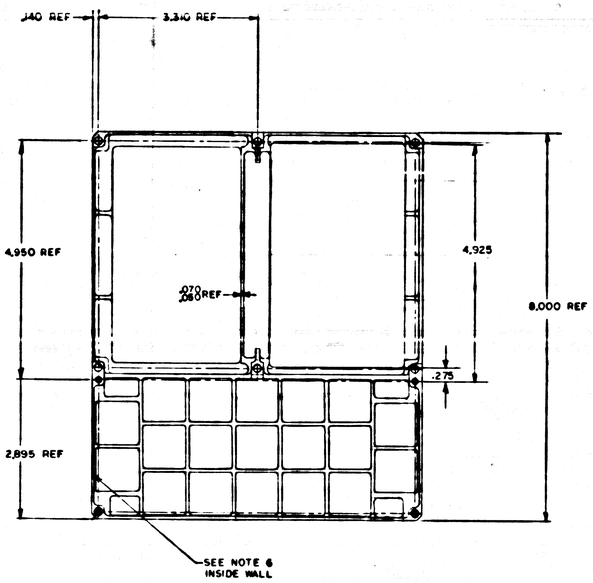
CODE IDENT NO	SIZE	DRAWING NO.
80230	D	2004699

SCALE 2/1 SHEET 1 OF 1

2004699 A







NOTES

1. MATL MAKE FROM 2004929-021
2. REMOVE BURRS AND SHARP EDGES .005/.015
3. ALL SURFACES 125
4. TOUCH UP ALL EXPOSED MACHINED SURFACES PER ND1002040, DO NOT EPOXY COAT
5. UNLESS OTHERWISE SPECIFIED ALL FILLETS AND RADII TO BE .09R MAX.
6. IDENTIFY WITH PART NO. PER ND1002019 APPROXIMATELY WHERE SHOWN
7. PAINT INDICATED SURFACES WITH 1008809-1, DARK GRAY EPOXY ENAMEL PER 1002279
8. FINAL COAT INDICATED SURFACES PER ND1002277 USING 1012543-003
9. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327

QTY REQD	PART OR IDENTIFYING NO.	MATERIAL OR NOTES	NOMENCLATURE OR DESCRIPTION	ITEM
			LIST OF MATERIALS	

2003985	
2003950	
2003934	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
CAPACITOR VALUES ARE IN μf
RESISTOR VALUES ARE IN OHMS
TOLERANCES ON
FRACTIONS DECIMALS ANGLES
.X ± .005 ± 2°
DO NOT SCALE THIS DRAWING

MATERIAL
SEE NOTE 1

M I T
INSTRUMENTATION LAB
CAMBRIDGE MASS

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

DRAWN	[signature]	8/14/67
CHECKED	[signature]	10 Aug 67
APPROVED	[signature]	7 Nov 67
APPROVED	[signature]	8 Nov 67
APPROVED QUAL	[signature]	9/14/67
APPROVED MISC	[signature]	11/1/67

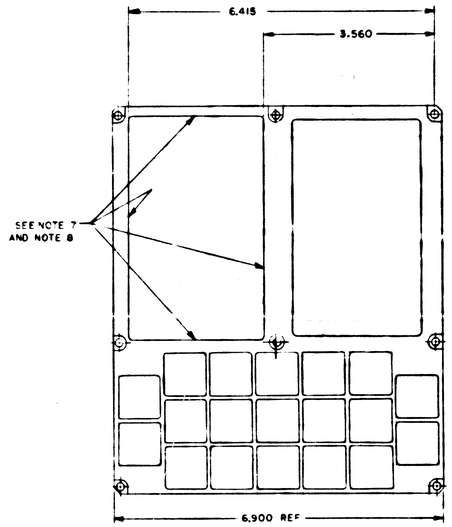
DATE

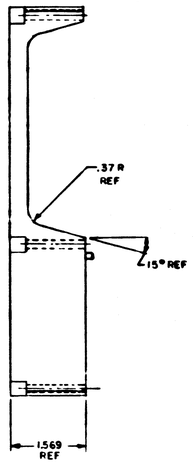
COVER, FRONT
AGC DSKY

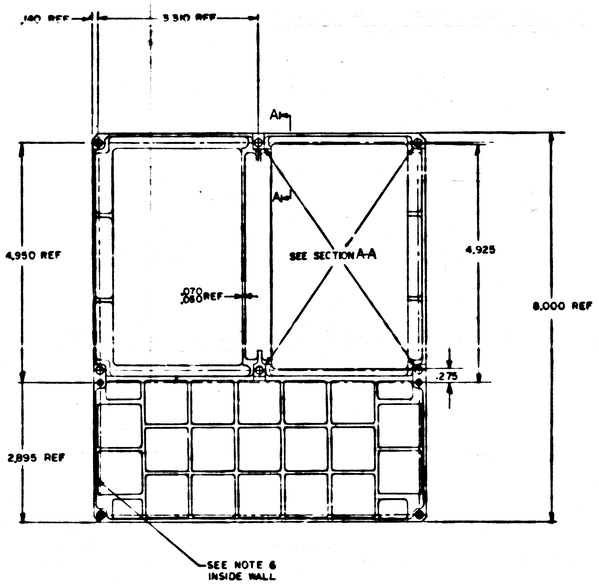
CODE IDENT NO	SIZE	DRAWING NO.
80230	E	2004739

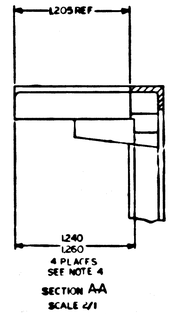
SCALE 1:1 SHEET 1 OF

REVISIONS TDRR 35095					
LTR	ZONE	DESCRIPTION	BY	CHK	APPROVED
A		CHANGED PER TDRR 35195			









NOTES

1. MATL MAKE FROM 2004329-021
2. REMOVE BURRS AND SHARP EDGES .005/.015
3. ALL SURFACES 125
4. TOUCH UP ALL EXPOSED MACHINED SURFACES PER ND1002040, DO NOT EPOXY COAT
5. UNLESS OTHERWISE SPECIFIED ALL FILLETS AND RADII TO BE .09R MAX.
6. IDENTIFY WITH PART NO. PER ND1002019 APPROXIMATELY WHERE SHOWN
7. PAINT INDICATED SURFACES WITH 1008809-1, DARK GRAY EPOXY ENAMEL PER 1002279
8. FINAL COAT INDICATED SURFACES PER ND1002277 USING 1012543-003
9. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327

QTY REQD	PART OR IDENTIFYING NO.	MATERIAL OR NOTES	NOMENCLATURE OR DESCRIPTION	FIND NO
			LIST OF MATERIALS	

2003885	
2003950	
2003994	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
CAPACITOR VALUES ARE IN μf
RESISTOR VALUES ARE IN OHMS
TOLERANCES ON
FRACTIONS ±.005 DECIMALS ±.005 ANGLES ±2°
DO NOT SCALE THIS DRAWING

MATERIAL: SEE NOTE 1

MIT INSTRUMENTATION LAB
CAMBRIDGE, MASS.

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

DRAWN		10/24/66
CHECKED		10/24/66
APPROVED		10 Nov 66
APPROVED QUAL		11/4/66
APPROVED MSC		DATE

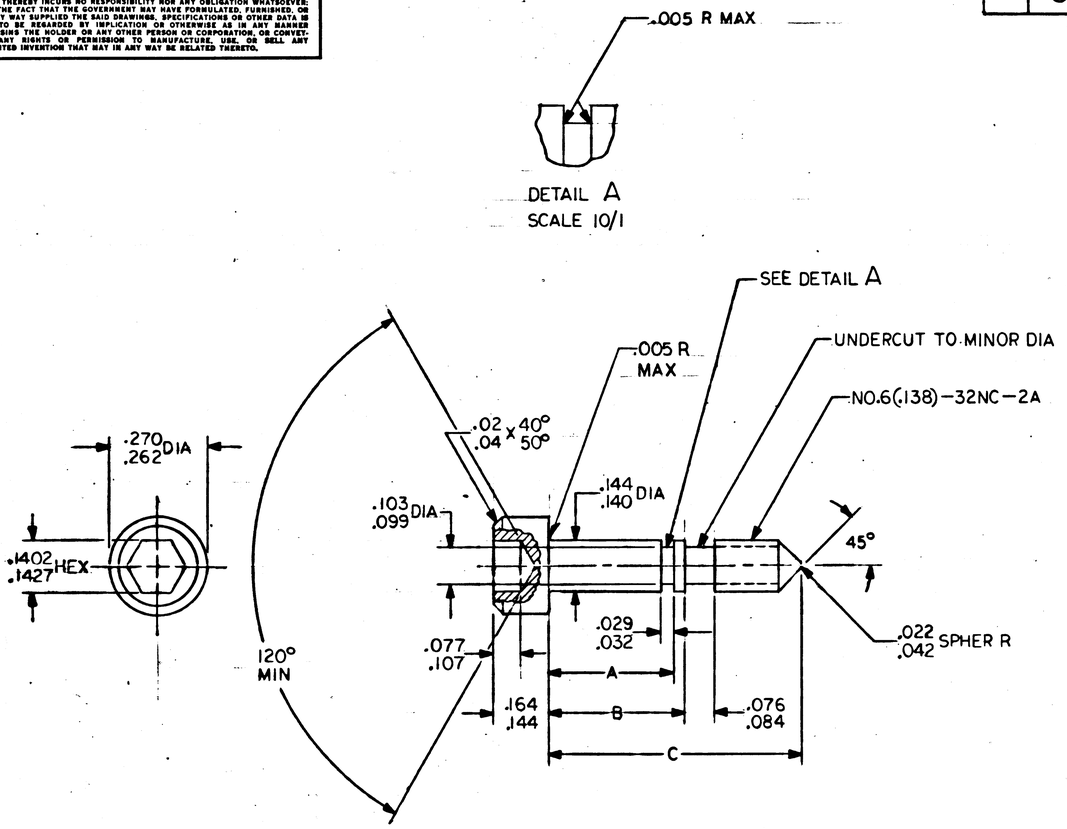
COVER, FRONT
AGC DSKY

CODE IDENT NO	SIZE	DRAWING NO
80230	E	2004739

SCALE 1/1 SHEET 1 OF

2004932 –

REVISIONS 20273						
SYM	ZONE	DESCRIPTION	DR	CHK	DATE	APPROVED



NOTES

1. MATL: 410 CRES, CLASS 410, COND. A PER QQ-S-763 (HEAD TO BE COLD FORMED)
2. REMOVE BURRS AND SHARP EDGES .005 MAX
3. PASSIVATE PER MIL-F-14072, FINISH E300, TYPE I
4. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
5. HEAT TREAT TO ROCKWELL RC36-43
6. CONCENTRICITY: ALL DIAMETERS MUST BE WITHIN .005 T.I.R.
7. IDENTIFY WITH DRAWING NO. AND REVISION PER ND1002019

DASH NO.	DIM. A	DIM. B	DIM. C
2004932-001	.336 .334	.378 .374	.755 .765
2004932-002	.211 .209	.253 .249	.580 .570

2003909	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
CAPACITOR VALUES ARE IN μf
RESISTOR VALUES ARE IN OHMS
TOLERANCES ON
FRACTIONS ± DECIMALS ± ANGLES ±1°
DO NOT SCALE THIS DRAWING

MATERIAL

SEE NOTE 1

QTY REQD	PART OR IDENTIFYING NO.	MATERIAL OR NOTES	NOMENCLATURE OR DESCRIPTION	FIND NO.

LIST OF MATERIALS

MIT INSTRUMENTATION LAB
CAMBRIDGE, MASS.

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

DRAWN J.P. Leonard	31 MAR 65	
CHECKED T. Yeager	2 APR 65	
APPROVED G. Linden Kaffenberger	11 Jun 65	SCREW, JACKING AGC DSKY
APPROVED Eldon C. Hall	21 June 65	
APPROVED MIT W. Kaufer	23 June 65	CODE IDENT NO. 80230 / SIZE C / DRAWING NO. 2004932
APPROVED MSC	5/24/65 DATE	SCALE 4/1 / SHEET 1 OF 1

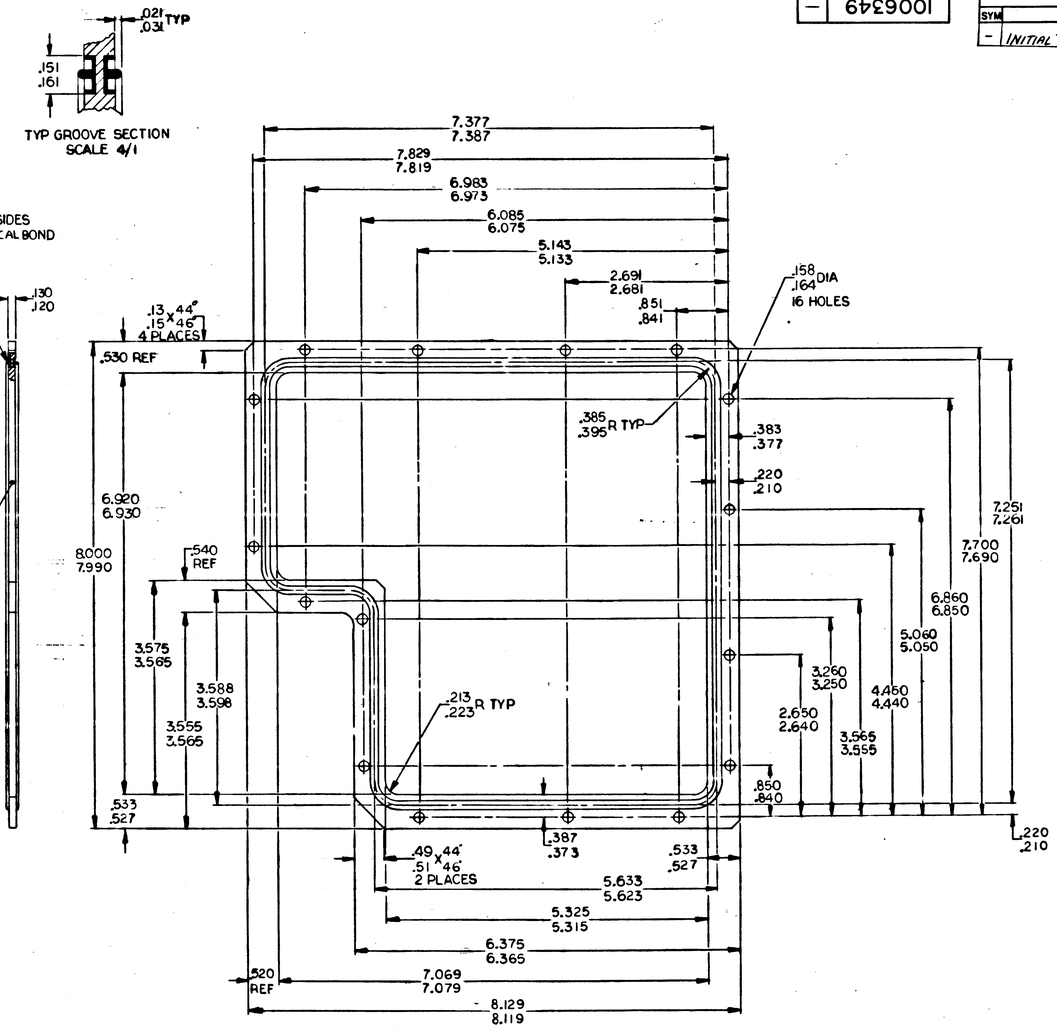
REQUIREMENTS:

1. GENERAL:
   - A. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327.
   - B. SUPPLIER SHALL CONFORM TO THE QUALITY ASSURANCE PROVISIONS CONTAINED IN MD 1015404, CLASS 2.
   - C. PART MARKING: UNITS SHALL BE MARKED: PER MD 1002019, ON THE SURFACE(S) INDICATED: WITH THE MANUFACTURER'S SYMBOL, LOT CODE OR NUMBER, AND NASA PART NUMBER (DRAWING NUMBER AND REVISION LETTER).
   - D. PREPARATION FOR DELIVERY SHALL BE IN ACCORDANCE WITH MD 1002215, CLASS 1, CODE 3.
     - (1) MARKING OF SHIPPING CONTAINERS SHALL CONFORM TO THE MARKING OF UNIT AND INTERMEDIATE PACKAGES AND THE METHODS OF MARKING PER MD 1002215.

2. ACCEPTANCE & INSPECTION (100%)
   - A. MECHANICAL PROPERTIES:
     - (1) DIMENSIONS: AS DELINEATED HEREIN.
     - (2) MARKING: AS SPECIFIED IN NOTES 1.C AND 1.D.
     - (3) COMPRESSION: RUBBER SEAL PORTION SHALL BE CAPABLE OF BEING COMPRESSED TO THE LEVEL OF THE PLATE WITHOUT DAMAGE.
     - (4) SURFACE ROUGHNESS 125 ✓
   - B. VENDOR SUPPLIED DATA: EACH SHIPMENT OF PARTS SHALL BE ACCOMPANIED BY THE FOLLOWING DOCUMENTATION
     - (1) CERTIFICATE OF COMPLIANCE WITH MATERIAL, HARDNESS AND FINISH REQUIREMENTS.
     - (2) CERTIFICATE OF COMPLIANCE TO 1015404 CLASS 2

3. DESIGN:
   - A. STORAGE LIFE: ONE YEAR MINIMUM (RUBBER GASKET) WHEN STORED AT ORDINARY ROOM CONDITIONS (77° ± 5°F AND 50% RH).
   - B. CONSTRUCTION: MACHINED OR PRECISION CAST ALUMINUM PLATE WITH BUTYL RUBBER GASKETS MOLDED IN PLACE.
     - (1) MATERIAL AND FINISH, PLATE: 6061-T6 ALUMINUM ALLOY PER QQ-A-250/11, BLACK ANODIZED PER MIL-A-8625, TYPE II, COLOR BLACK.
     - (2) MATERIAL, RUBBER GASKET: BUTYL TYPE RUBBER PER AMS-3238.
     - (3) HARDNESS, RUBBER: 70 ± 5 SHORE A DUROMETER (ASTM D-785).
   - C. SEALING: WHEN COMPRESSED TO THE PLATE LEVEL, THE RUBBER SHALL BE CAPABLE OF SEALING AGAINST A LEAKAGE OF 10^{-8} ATM CC/SEC/INCH OF SEAL OF DRY NITROGEN AT A PRESSURE DIFFERENTIAL OF 2 ATMOSPHERES.

PROCURE ONLY FROM APPROVED SOURCES LISTED IN MD 1002034 FOR THIS DRAWING.



REVISIONS			
SYM	DESCRIPTION	DATE	APPROVED
-	INITIAL RELEASE CLASS A PER TORR 19686	5-26-66	WR

— 1006349

MASTER

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON
DECIMALS .xx ± .xxx ± ANGLES ±
DO NOT SCALE DRAWING
MATERIAL

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
LIST OF MATERIALS			

MIT INSTRUMENTATION LAB CAMBRIDGE MASS (CONTRACT) DSR 80

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

DRAWN — DATE 5 MAY 65
CHECKED — DATE 5 MAY 65
APPROVAL
APPROVAL
APPROVAL — DATE 26 May 66
NASA APPROVAL — DATE 5/24/66
MIT APPROVAL
MIT APPROVAL — DATE 26 May 66

GASKET, BONDED, RUBBER, RETAINED.
SPECIFICATION CONTROL DRAWING

CODE IDENT NO.	SIZE	NASA DRAWING NO.
—	D	1006349

SCALE 1/1 WT SHEET 1 OF 1

—	1006350

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVED
—	INITIAL RELEASE CLASS A PER TDRR 20100	6-15-65	

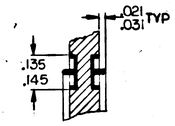
REQUIREMENTS:

1. GENERAL:
   - A. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327.
   - B. SUPPLIER SHALL CONFORM TO THE QUALITY ASSURANCE PROVISIONS CONTAINED IN ND 1015404, CLASS 2.
   - C. PART MARKING: UNITS SHALL BE MARKED: PER ND 1002019, ON THE SURFACE(S) INDICATED: WITH THE MANUFACTURER'S SYMBOL, LOT CODE OR NUMBER, AND NASA PART NUMBER (DRAWING NUMBER AND REVISION LETTER).
   - D. PREPARATION FOR DELIVERY SHALL BE IN ACCORDANCE WITH ND 1002215, CLASS I , CODE 3.
     - (1) MARKING OF SHIPPING CONTAINERS SHALL CONFORM TO THE MARKING OF UNIT AND INTERMEDIATE PACKAGES AND THE METHODS OF MARKING PER ND 1002215.

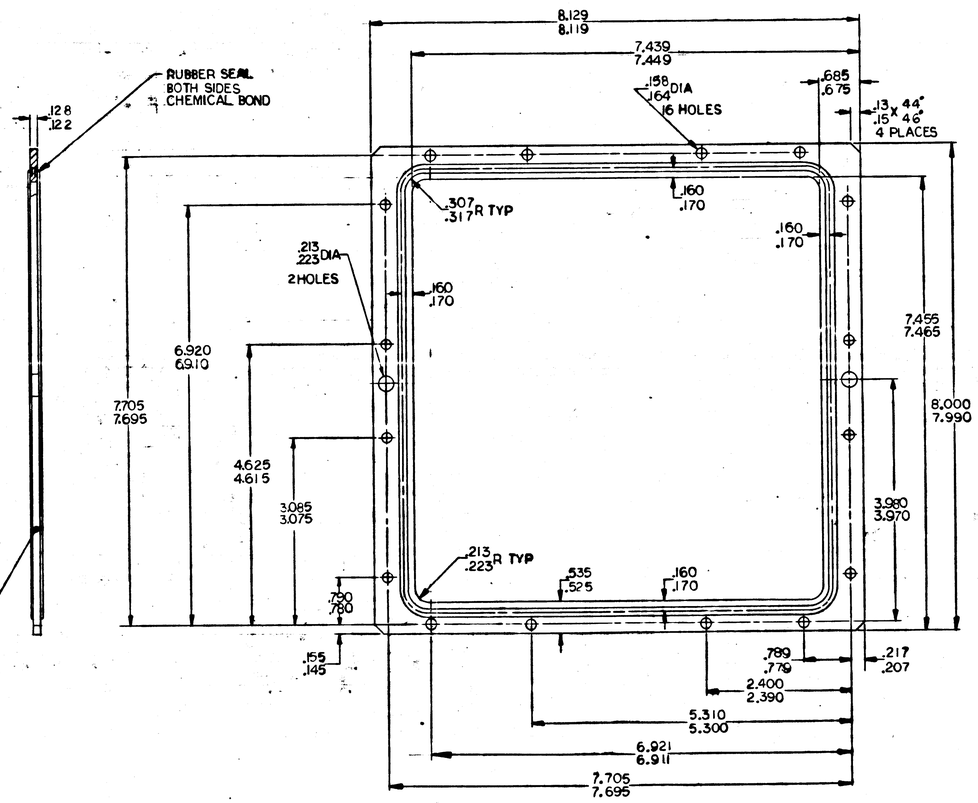
2. ACCEPTANCE & INSPECTION (100%)
   - A. MECHANICAL PROPERTIES:
     - (1) DIMENSIONS: AS DELINEATED HEREIN.
     - (2) MARKING: AS SPECIFIED IN NOTES 1.C AND 1.D.
     - (3) COMPRESSION: RUBBER SEAL PORTION SHALL BE CAPABLE OF BEING COMPRESSED TO THE LEVEL OF THE PLATE WITHOUT DAMAGE.
     - (4) SURFACE ROUGHNESS 125
   - B. VENDOR SUPPLIED DATA: EACH SHIPMENT OF PARTS SHALL BE ACCOMPANIED BY THE FOLLOWING DOCUMENTATION.
     - (1) CERTIFICATE OF COMPLIANCE WITH MATERIAL, HARDNESS AND FINISH REQUIREMENTS.
     - (2) CERTIFICATE OF COMPLIANCE WITH ND 1015404, CLASS 2.

3. DESIGN:
   - A. STORAGE LIFE: ONE YEAR MINIMUM (RUBBER GASKET) WHEN STORED AT ORDINARY ROOM CONDITIONS (77°± 5°F AND 50% RH).
   - B. CONSTRUCTION: MACHINED OR PRECISION CAST ALUMINUM PLATE WITH BUTYL RUBBER GASKETS MOLDED IN PLACE.
     - (1) MATERIAL AND FINISH, PLATE: 6061-T6 ALUMINUM ALLOY PER QQ-A-250/11, BLACK ANODIZED PER MIL-A-8625 , TYPE II, COLOR BLACK.
     - (2) MATERIAL, RUBBER GASKET: BUTYL TYPE RUBBER PER AMS-3258A.
     - (3) HARDNESS, RUBBER: 70 ± 5 SHORE A DUROMETER (ASTM D-789).
   - C. SEALING: WHEN COMPRESSED TO THE PLATE LEVEL, THE RUBBER SHALL BE CAPABLE OF SEALING AGAINST A LEAKAGE OF 10^{-8} ATM CC/SEC/INCH OF SEAL OF DRY NITROGEN AT A PRESSURE DIFFERENTIAL OF 2 ATMOSPHERES.

PROCURE ONLY FROM APPROVED SOURCES LISTED IN ND 1002034 FOR THIS DRAWING.



TYP GROOVE SECTION
SCALE 4/1



MASTER

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON
DECIMALS .XX ± DECIMALS .XXX ± ANGLES ±
DO NOT SCALE DRAWING
MATERIAL

MIT INSTRUMENTATION LAB, Cambridge, Mass.

DRAWN	DATE 6 MAY 65
CHECKED	DATE 6 MAY 65
APPROVAL	
APPROVAL	
APPROVAL	
NASA APPROVAL	6/15/65
MIT APPROVAL	6-15-65
MIT APPROVAL	

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

GASKET, BONDED, RUBBER, RETAINED
SPECIFICATION CONTROL DRAWING

CODE IDENT NO.	SIZE	NASA DRAWING NO.
80230	D	1006350
SCALE 1/1	WT	SHEET 1 OF 1

1006350

REQUIREMENTS:

1. GENERAL:

   A. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327.

   B. SUPPLIER SHALL CONFORM TO THE QUALITY ASSURANCE PROVISIONS CONTAINED IN ND 1015404, CLASS 3

   C. PART MARKING: IDENTIFY PER ND 1002019. THE SURFACE(S) INDICATED: WITH THE MANUFACTURER'S SYMBOL, LOT CODE OR NUMBER, AND NASA PART NUMBER (DRAWING NUMBER AND REVISION LETTER).

   D. PREPARATION FOR DELIVERY SHALL BE IN ACCORDANCE WITH ND 1002215, CLASS I , CODE 3.
      (1) MARKING OF SHIPPING CONTAINERS SHALL CONFORM TO THE MARKING OF UNIT AND INTERMEDIATE PACKAGES AND THE METHODS OF MARKING PER ND 1002215.

2. ACCEPTANCE & INSPECTION (100%)

   A. MECHANICAL PROPERTIES:
      (1) DIMENSIONS: AS DELINEATED HEREIN.
      (2) MARKING: AS SPECIFIED IN NOTES 1.C AND 1.D.
      (3) COMPRESSION: RUBBER SEAL PORTION SHALL BE CAPABLE OF BEING COMPRESSED TO THE LEVEL OF THE PLATE WITHOUT DAMAGE.
      (4) SURFACE ROUGHNESS 125/ PER MIL-STD-10

   B. VENDOR SUPPLIED DATA: EACH SHIPMENT OF PARTS SHALL BE ACCOMPANIED BY THE FOLLOWING DOCUMENTATION.
      (1) CERTIFICATE OF COMPLIANCE WITH MATERIAL, HARDNESS AND FINISH REQUIREMENTS.
      (2) CERTIFICATE OF COMPLIANCE WITH ND 1015404, CLASS 3 .

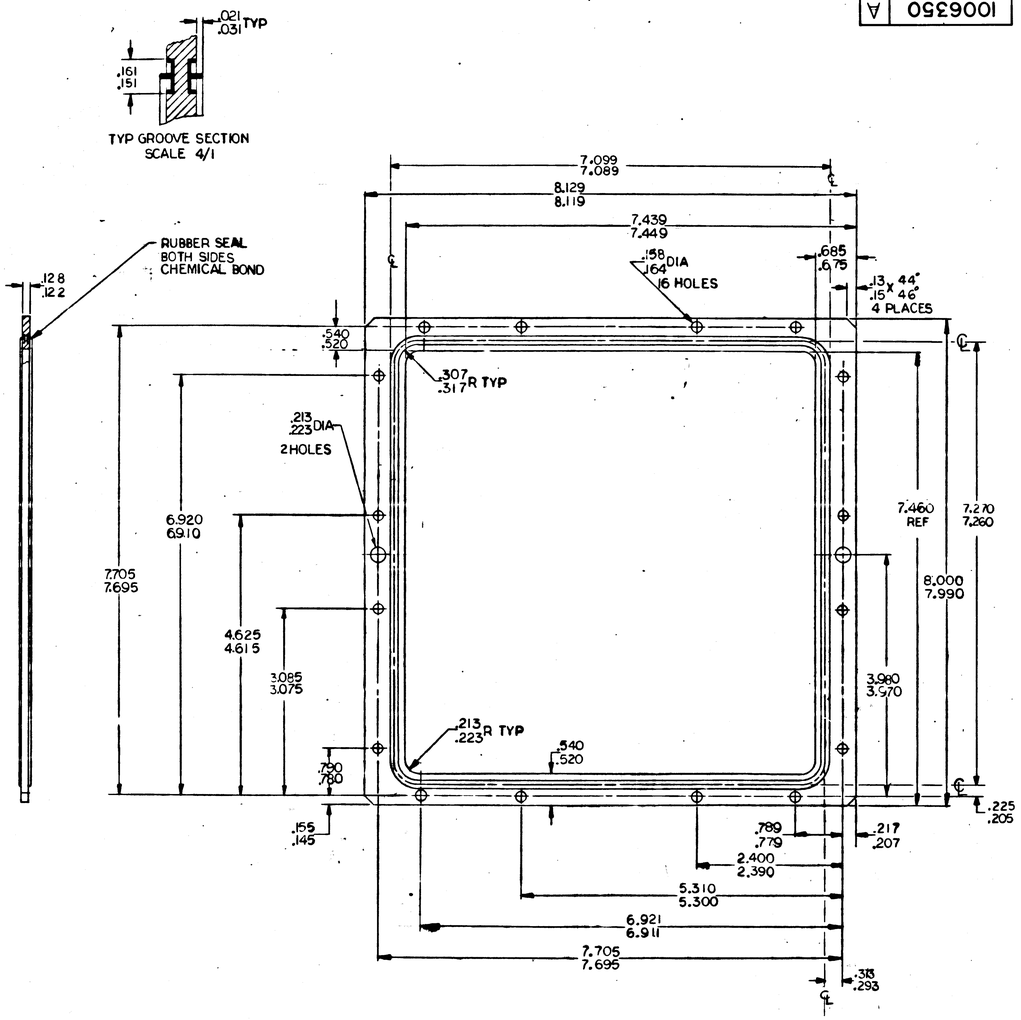
3. DESIGN:

   A. STORAGE LIFE: ONE YEAR MINIMUM (RUBBER GASKET) WHEN STORED AT ORDINARY ROOM CONDITIONS (77° ± 5°F AND 50% RH).

   B. CONSTRUCTION: MACHINED OR PRECISION CAST ALUMINUM PLATE WITH BUTYL RUBBER GASKETS MOLDED IN PLACE.
      (1) MATERIAL AND FINISH, PLATE: 6061-T6 ALUMINUM ALLOY PER QQ-A-250/11, CHROMATE FILM PER MIL-C-5541, TYPE II, CLASS 3.
      (2) MATERIAL, RUBBER GASKET: BUTYL TYPE RUBBER PER AMS-3238A.
      (3) HARDNESS, RUBBER: 70 ± 5 SHORE A DUROMETER (ASTM D-785).

   C. SEALING: WHEN COMPRESSED TO THE PLATE LEVEL, THE RUBBER SHALL BE CAPABLE OF SEALING AGAINST A LEAKAGE OF 2×10^{-8} ATM CC/SEC/INCH OF SEAL OF DRY NITROGEN AT A PRESSURE DIFFERENTIAL OF 2 ATMOSPHERES AND A TEMPERATURE OF -10° TO 82°C.

PROCURE ONLY FROM APPROVED SOURCES LISTED IN ND 1002034 FOR THIS DRAWING.



REVISIONS			
SYM	DESCRIPTION	DATE	APPROVED
—	INITIAL RELEASE CLASS A PER TDRR 20100	6-15-67	
A	REVISED PER TDRR 22129	9/14	CAL 11/22

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.

LIST OF MATERIALS

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON
DECIMALS .XX ±, .XXX ±, ANGLES ±
DO NOT SCALE DRAWING
MATERIAL

MIT INSTRUMENTATION LAB, CAMBRIDGE, MASS. (DRAFT)
DRAWN — DATE 5/17/67
CHECKED — DATE 5/17/67
APPROVAL
APPROVAL
APPROVAL
NASA APPROVAL — 6/15/67
MIT APPROVAL — 6-15-67
MIT APPROVAL

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

GASKET, BONDED, RUBBER, RETAINED
SPECIFICATION CONTROL DRAWING

CODE IDENT NO.	SIZE	NASA DRAWING NO.
80230	D	1006350

SCALE 1/1 | WT | SHEET 1 OF 1

1006350 A

REVISIONS						
SYM	ZONE	DESCRIPTION	DR	CHK	DATE	APPROVED
		INITIAL RELEASE CLASS A PER TDRR 22269			9-8-65	

REQUIREMENTS:

1. GENERAL:
   - A. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327.
   - B. SUPPLIER SHALL CONFORM TO THE QUALITY ASSURANCE PROVISIONS AS CONTAINED IN MIL-Q-9858.
   - C. MARKING: UNITS SHALL BE MARKED PER ND 1002019 WITH THE NASA PART NUMBER (DRAWING NUMBER, REVISION LETTER AND DASH NUMBER).
   - D. PREPARATION FOR DELIVERY SHALL BE IN ACCORDANCE WITH ND 1002215 CLASS I, CODE 3.
     - (1) MARKING OF SHIPPING CONTAINERS SHALL CONFORM TO THE MARKING OF UNIT AND INTERMEDIATE PACKAGES AND METHODS OF MARKING AS SPECIFIED IN ND 1002215.
   - E. WHEN SUBJECTED TO THE ENVIRONMENTAL REQUIREMENTS OF ND 1002056, UNITS SHALL NOT EXPERIENCE MORE THAN 20% CHANGE OF PHOTOMETRIC PARAMETERS, AND SHALL EXHIBIT NO TOXIC OUTGASSING.
2. ACCEPTANCE AND INSPECTION: SAMPLE
   - A. MARKING AND PREPARATION FOR DELIVERY AS SPECIFIED ABOVE AND IN TABLE I.
   - B. DIMENSIONS AND TOLERANCES AS SPECIFIED HEREIN.
   - C. LIGHT DISTRIBUTION THROUGH MARKING: 33% MINIMUM LIGHT TRANSMISSION WHEN BACKLIGHTED WITH AN EL LAMP PER SCD 1006340 LOCATED DIRECTLY BEHIND THE BACK SURFACE OF THE CAP.
   - D. VENDOR SUPPLIED DATA: EACH SHIPMENT OF PARTS SHALL BE ACCOMPANIED BY THE FOLLOWING DOCUMENTATION.
     - (1) A CERTIFICATE OF COMPLIANCE WITH THE MATERIAL REQUIREMENTS SPECIFIED HERIN.
     - (2) A CERTIFICATE OF COMPLIANCE WITH MIL-Q-9858.
3. DESIGN:
   - A. MATERIAL: ACRYLIC PER MIL-P-5425, FINISH A.
   - B. FINISH: BACKGROUND SHALL BE TT-E-527 BLACK LUSTERLESS ENAMEL COLOR NO. 37038 PER FED-STD-595. [illegible] CHARACTERS, NON-ILLUMINATED, TO APPEAR WHITE COLOR NO. 37875 PER FED-STD-595.
   - C. MARKINGS PER TABLE I SHALL BE ENGRAVED THROUGH BLACK PAINT ONLY PER ND 1002019 AND ND 1002122 TYPE II, CLASS 1. THIS NOTE ONLY APPLIES IF ENGRAVING IS USED.
   - D. COLOR: WHEN BACKLIGHTED PER 2.C., COLOR SHALL BE WHITE, WITH COLOR COORDINATES X = .330 ± .030, Y = .330 ± .030 PER CIE CHROMACITY DIAGRAM.
   - E. GLOSS: SHALL NOT EXCEED 5 UNITS ON EXTERIOR SURFACES, AS MEASURED PER ASTM METHOD D523.

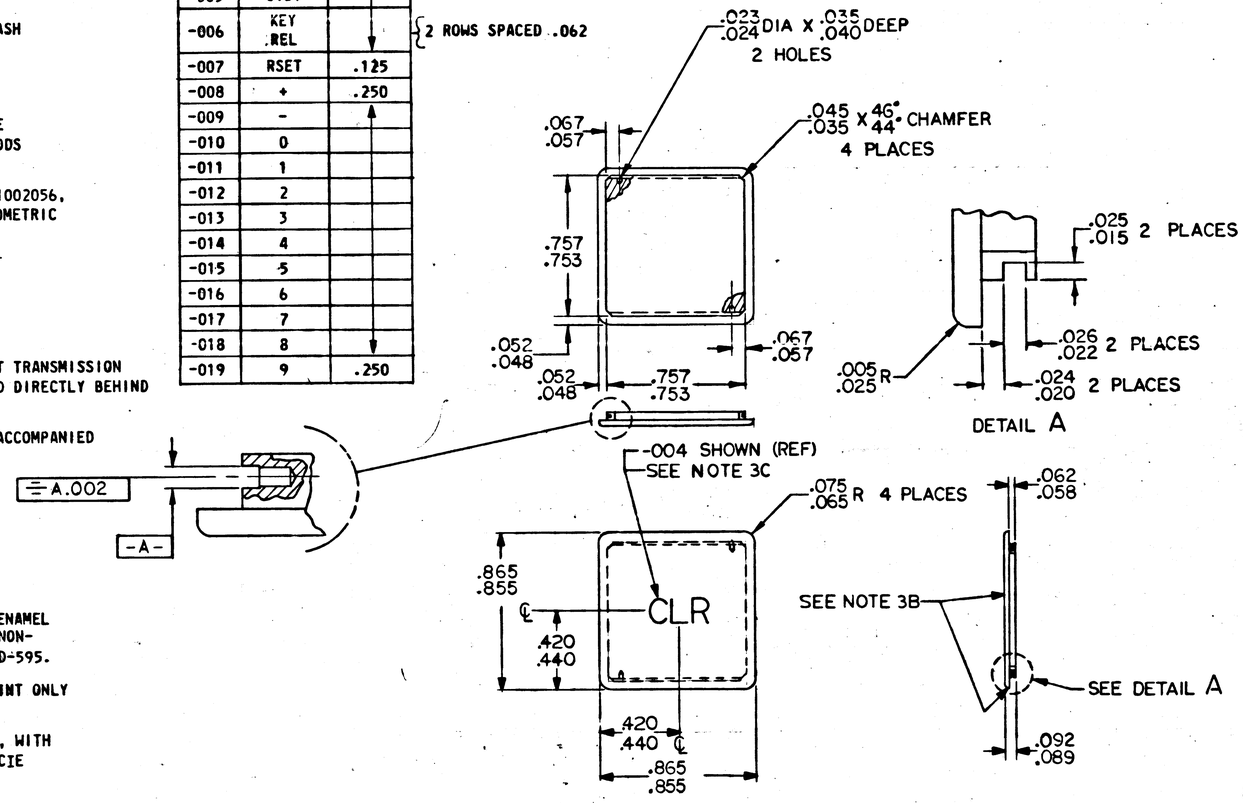
PROCURE ONLY FROM APPROVED SOURCES LISTED IN ND 1002034 FOR THIS DRAWING.

NOTED

TABLE I

DASH NO.	MARKING	HEIGHT
-001	VERB	.125
-002	NOUN	
-003	ENTR	
-004	CLR	
-005	STBY	
-006	KEY .REL	
-007	RSET	.125
-008	+	.250
-009	-	
-010	0	
-011	1	
-012	2	
-013	3	
-014	4	
-015	5	
-016	6	
-017	7	
-018	8	
-019	9	.250

{2 ROWS SPACED .062



QTY REQD	PART OR IDENTIFYING NO.	MATERIAL OR NOTES	NOMENCLATURE OR DESCRIPTION	FIND NO.

LIST OF MATERIALS

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
CAPACITOR VALUES ARE IN μf
RESISTOR VALUES ARE IN OHMS
TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING

MATERIAL: SEE NOTE

MIT INSTRUMENTATION LAB
CAMBRIDGE, MASS.

DRAWN J. Doty 10/15/65
CHECKED E. Gaucio 10/15/65
APPROVED
APPROVED Edmond Hall 10/15/65
APPROVED MIT W. Kupfer 10/15/65
APPROVED MSC NOT REQUIRED PER LETTER PP7-65-612 DATE

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

CAP, ELECTRICAL, ENGRAVED
SPECIFICATION CONTROL DRAWING

CODE IDENT NO.	SIZE	DRAWING NO.
80230	C	1006353

SCALE NONE SHEET 1 OF 1

REVISIONS						
SYM	ZONE	DESCRIPTION	DR	CHK	DATE	APPROVED
—		INITIAL RELEASE CLASS A PER TDRR 22269			9-8-65	WR
A		REVISED PER TDRR 23458			11/9/65	WR

REQUIREMENTS:

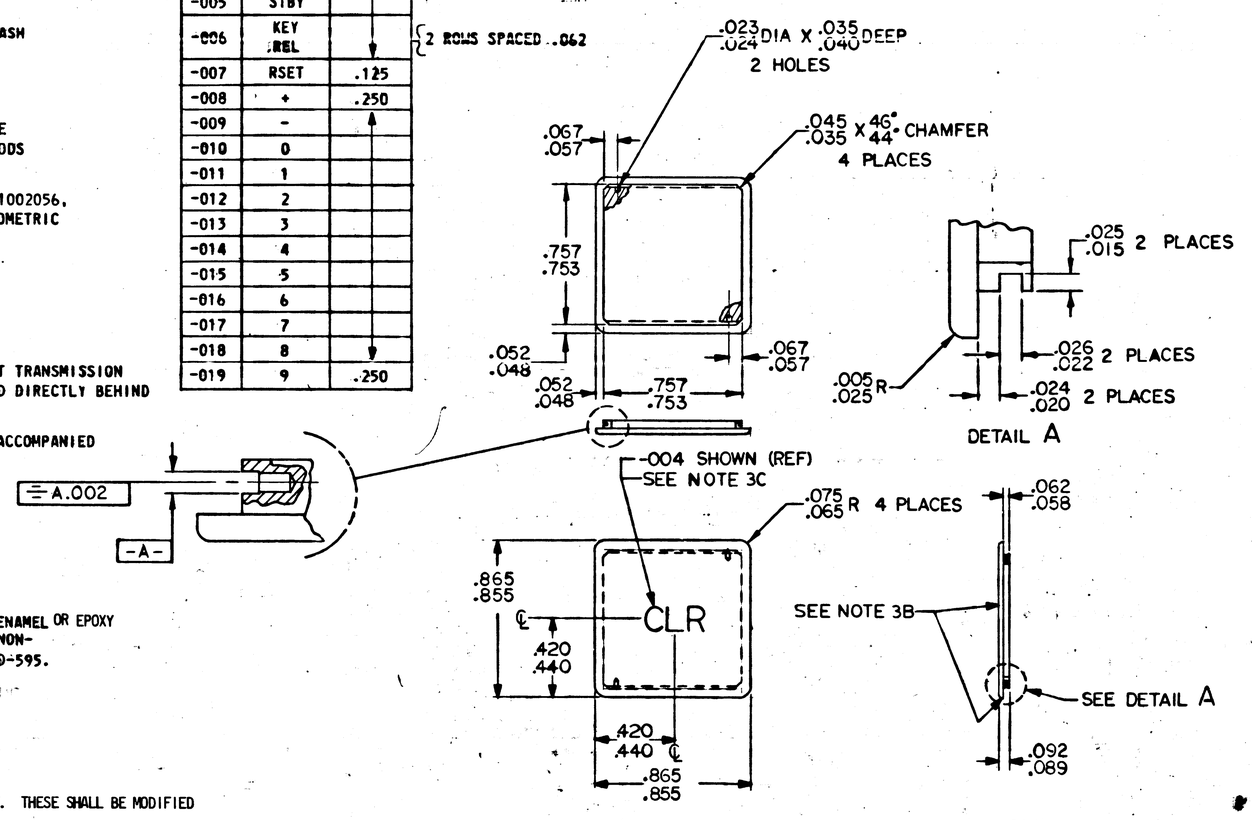
1. GENERAL:
   - A. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327.
   - B. SUPPLIER SHALL CONFORM TO THE QUALITY ASSURANCE PROVISIONS AS CONTAINED IN MIL-Q-9858.
   - C. MARKING: UNITS SHALL BE MARKED PER ND 1002019 WITH THE NASA PART NUMBER (DRAWING NUMBER, REVISION LETTER AND DASH NUMBER).
   - D. PREPARATION FOR DELIVERY SHALL BE IN ACCORDANCE WITH ND 1002215 CLASS I, CODE 3.
     - (1) MARKING OF SHIPPING CONTAINERS SHALL CONFORM TO THE MARKING OF UNIT AND INTERMEDIATE PACKAGES AND METHODS OF MARKING AS SPECIFIED IN ND 1002215.
   - E. WHEN SUBJECTED TO THE ENVIRONMENTAL REQUIREMENTS OF ND 1002056, UNITS SHALL NOT EXPERIENCE MORE THAN 20% CHANGE OF PHOTOMETRIC PARAMETERS, AND SHALL EXHIBIT NO TOXIC OUTGASSING.
2. ACCEPTANCE AND INSPECTION: SAMPLE
   - A. MARKING AND PREPARATION FOR DELIVERY AS SPECIFIED ABOVE AND IN TABLE I.
   - B. DIMENSIONS AND TOLERANCES AS SPECIFIED HEREIN.
   - C. LIGHT DISTRIBUTION THROUGH MARKING: 33% MINIMUM LIGHT TRANSMISSION WHEN BACKLIGHTED WITH AN EL LAMP PER SCD 1006340 LOCATED DIRECTLY BEHIND THE BACK SURFACE OF THE CAP.
   - D. VENDOR SUPPLIED DATA: EACH SHIPMENT OF PARTS SHALL BE ACCOMPANIED BY THE FOLLOWING DOCUMENTATION.
     - (1) A CERTIFICATE OF COMPLIANCE WITH THE MATERIAL REQUIREMENTS SPECIFIED HEREIN.
     - (2) A CERTIFICATE OF COMPLIANCE WITH MIL-Q-9858.
3. DESIGN:
   - A. MATERIAL: ACRYLIC PER MIL-P-5425, FINISH A.
   - B. FINISH: BACKGROUND SHALL BE TT-E-527 BLACK LUSTERLESS ENAMEL OR EPOXY COLOR NO. 37038 PER FED-STD-595. CHARACTERS, NON-ILLUMINATED, TO APPEAR WHITE COLOR NO. 37875 PER FED-STD-595.
   - C. MARKINGS: PER TABLE 1 SHALL BE GORTON NORMAL WITH
     1. PROPORTIONS PER ND 1002122 TYPE II, CLASS 1 EXCEPT AS NOTED:
        - a) CHARACTER HEIGHT TO BE MEASURED AS OVERALL HEIGHT.
        - b) LINE STROKE WIGTH TO BE .030 FOR .250 HIGH CHARACTERS.
        - c) LINE STROKE WIDTH TO BE .022 FOR .125 HIGH CHARACTERS.
     2. FUTURA DEMIBOLD MARKINGS PER ND 1002122 SHALL ALSO BE ACCEPTABLE. THESE SHALL BE MODIFIED TO HAVE STROKE WIDTHS AS IN 3C1.
   - D. COLOR: WHEN BACKLIGHTED PER 2.C., COLOR SHALL BE WHITE, WITH COLOR COORDINATES X = .330 ± .030, Y = .330 ± .030, PER CIE CHROMACITY DIAGRAM.
   - E. CONTRAST: WHITE COLOR IN 3B MAY BE REDUCED IN SATURATION PROVIDED A MINIMUM CONTRAST OF 5 UNITS BETWEEN BLACK BACKGROUND AND UNLIGHTED CHARACTER WHEN MEASURED IN ACCORDANCE WITH MIL-P-7788. FOR CONTRAST MEASUREMENT THE CAP MAY BE BACKED WITH AN EL LAMP PER SCD 1006340 SPACED 0.2 INCHES AWAY.
   - F. GLOSS: SHALL NOT EXCEED 5 UNITS ON EXTERIOR SURFACES, AS MEASURED PER ASTM METHOD D523.

PROCURE ONLY FROM APPROVED SOURCES LISTED IN ND 1002034 FOR THIS DRAWING.

MASTER

TABLE I

DASH NO.	MARKING	HEIGHT
-001	VERB	.125
-002	NOUN	↑
-003	ENTR	
-004	CLR	
-005	STBY	
-006	KEY REL	↓
-007	RSET	.125
-008	+	.250
-009	-	↑
-010	0	
-011	1	
-012	2	
-013	3	
-014	4	
-015	5	
-016	6	
-017	7	
-018	8	↓
-019	9	.250



QTY REQD	PART OR IDENTIFYING NO.	MATERIAL OR NOTES	NOMENCLATURE OR DESCRIPTION	FIND NO.
LIST OF MATERIALS				

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
CAPACITOR VALUES ARE IN μf
RESISTOR VALUES ARE IN OHMS
TOLERANCES ON
FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING

MATERIAL: SEE NOTE

MIT INSTRUMENTATION LAB, CAMBRIDGE, MASS.

DRAWN J. Doty 11/9/65
CHECKED G Gleason 11/9/65
APPROVED
APPROVED Edwin A Hall 11/9/65
APPROVED MIT W Cooper 11/9/65
APPROVED MSC NOT REQUIRED PER LETTER ASA PP7-65-612
DATE

MANNED SPACECRAFT CENTER, HOUSTON, TEXAS

CAP, ELECTRICAL, ENGRAVED

SPECIFICATION CONTROL DRAWING

CODE IDENT NO.	SIZE	DRAWING NO.
80230	C	1006353

SCALE NONE — SHEET 1 OF 1

REVISIONS

SYM	ZONE	DESCRIPTION	DR	CHK	DATE	APPROVED
—		INITIAL RELEASE CLASS A PER TDRR 22269			9-8-65	WK
A		REVISED PER TDRR 23458			11/9/65	WK
B		REVISED PER TDRR 29902	RWH		13 JUL 66	

REQUIREMENTS:

1. GENERAL:

A. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327.

B. SUPPLIER SHALL CONFORM TO THE QUALITY ASSURANCE PROVISIONS AS CONTAINED IN MIL-Q-9858.

C. MARKING: UNITS SHALL BE MARKED PER ND 1002019 WITH THE NASA PART NUMBER (DRAWING NUMBER, REVISION LETTER AND DASH NUMBER).

D. PREPARATION FOR DELIVERY SHALL BE IN ACCORDANCE WITH ND 1002215 CLASS I, CODE 3.

(1) MARKING OF SHIPPING CONTAINERS SHALL CONFORM TO THE MARKING OF UNIT AND INTERMEDIATE PACKAGES AND METHODS OF MARKING AS SPECIFIED IN ND 1002215.

E. WHEN SUBJECTED TO THE ENVIRONMENTAL REQUIREMENTS OF ND 1002056, UNITS SHALL NOT EXPERIENCE MORE THAN 20% CHANGE OF PHOTOMETRIC PARAMETERS, AND SHALL EXHIBIT NO TOXIC OUTGASSING.

2. ACCEPTANCE AND INSPECTION: SAMPLE

A. MARKING AND PREPARATION FOR DELIVERY AS SPECIFIED ABOVE AND IN TABLE I.

B. DIMENSIONS AND TOLERANCES AS SPECIFIED HEREIN.

C. LIGHT DISTRIBUTION THROUGH MARKING: 33% MINIMUM LIGHT TRANSMISSION WHEN BACKLIGHTED WITH AN EL LAMP PER SCD 1006340 LOCATED DIRECTLY BEHIND THE BACK SURFACE OF THE CAP.

D. VENDOR SUPPLIED DATA: EACH SHIPMENT OF PARTS SHALL BE ACCOMPANIED BY THE FOLLOWING DOCUMENTATION.

(1) A CERTIFICATE OF COMPLIANCE WITH THE MATERIAL REQUIREMENTS SPECIFIED HEREIN.

(2) A CERTIFICATE OF COMPLIANCE WITH MIL-Q-9858.

3. DESIGN:

A. MATERIAL: ACRYLIC PER MIL-P-5425, FINISH A.

B. FINISH: BACKGROUND SHALL BE TT-E-527 BLACK LUSTERLESS ENAMEL OR EPOXY COLOR NO. 37038 PER FED-STD-595. CHARACTERS, NON-ILLUMINATED, TO APPEAR WHITE COLOR NO. 37875 PER FED-STD-595.

C. MARKINGS: PER TABLE 1 SHALL BE GORTON NORMAL WITH

1. PROPORTIONS PER ND 1002122 TYPE II, CLASS 1 EXCEPT AS NOTED:
   a) CHARACTER HEIGHT TO BE MEASURED AS OVERALL HEIGHT.
   b) LINE STROKE WIDTH TO BE .030 FOR .250 HIGH CHARACTERS.
   c) LINE STROKE WIDTH TO BE .022 FOR .125 HIGH CHARACTERS.

2. FUTURA DEMIBOLD MARKINGS PER ND 1002122 SHALL ALSO BE ACCEPTABLE. THESE SHALL BE MODIFIED TO HAVE STROKE WIDTHS AS IN 3C1.

D. COLOR: WHEN BACKLIGHTED PER 2.C., COLOR SHALL BE WHITE, WITH COLOR COORDINATES X = .330 ± .030, Y = .330 ± .030, PER CIE CHROMACITY DIAGRAM.

E. CONTRAST: WHITE COLOR IN 3B MAY BE REDUCED IN SATURATION PROVIDED A MINIMUM CONTRAST OF 5 UNITS BETWEEN BLACK BACKGROUND AND UNLIGHTED CHARACTER WHEN MEASURED IN ACCORDANCE WITH MIL-P-7788. FOR CONTRAST MEASUREMENT THE CAP MAY BE BACKED WITH AN EL LAMP PER SCD 1006340 SPACED 0.2 INCHES AWAY.

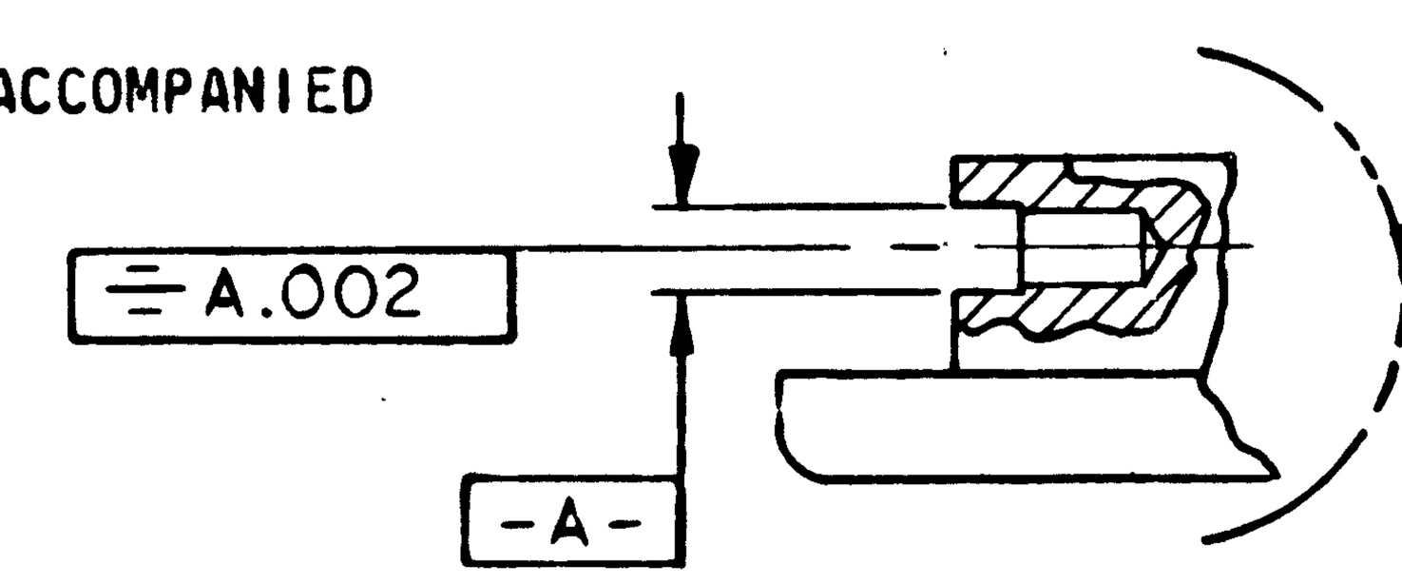
F. GLOSS: SHALL NOT EXCEED 5 UNITS ON EXTERIOR SURFACES, AS MEASURED PER ASTM METHOD D523.

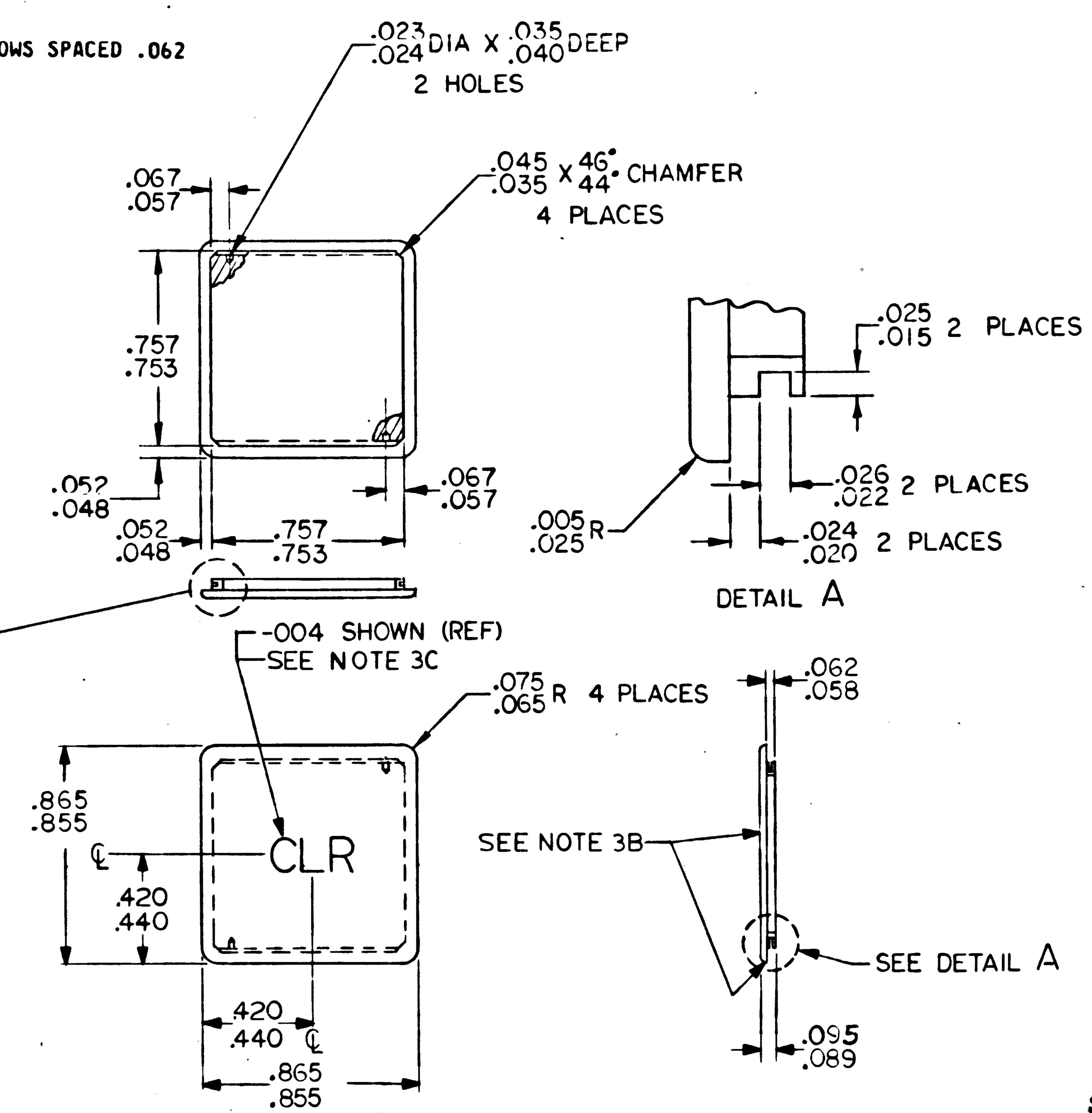
PROCURE ONLY FROM APPROVED SOURCES LISTED IN ND 1002034 FOR THIS DRAWING.

TABLE I

DASH NO.	MARKING	HEIGHT
-001	VERB	.125
-002	NOUN	
-003	ENTR	
-004	CLR	
-005	STBY	
-006	KEY REL	
-007	RSET	.125
-008	+	.250
-009	-	
-010	0	
-011	1	
-012	2	
-013	3	
-014	4	
-015	5	
-016	6	
-017	7	
-018	8	
-019	9	.250

2 ROWS SPACED .062





QTY REQD	PART OR IDENTIFYING NO.	MATERIAL OR NOTES	NOMENCLATURE OR DESCRIPTION	FIND NO.

LIST OF MATERIALS

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
CAPACITOR VALUES ARE IN μf
RESISTOR VALUES ARE IN OHMS
TOLERANCES ON
FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING

MATERIAL: SEE NOTE

MIT INSTRUMENTATION LAB
CAMBRIDGE, MASS.

DRAWN J. Doty 9-8-65
CHECKED [signature] 28 JUL 66
APPROVED
APPROVED Ellen C Hall 9 Sep 65
APPROVED MIT W Kupfer 9 Sep 65
APPROVED MSC
DATE

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

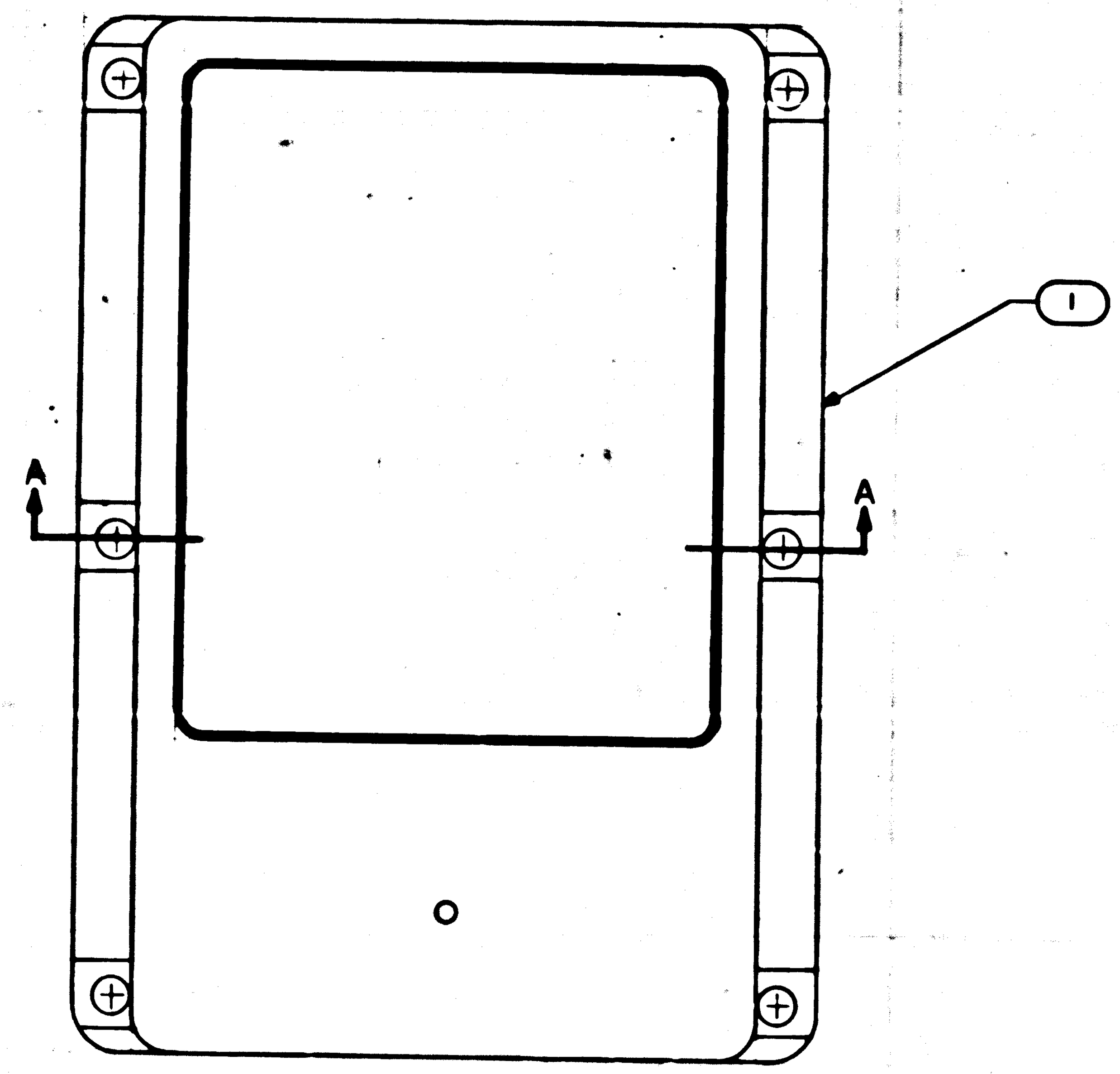
CAP, ELECTRICAL, ENGRAVED

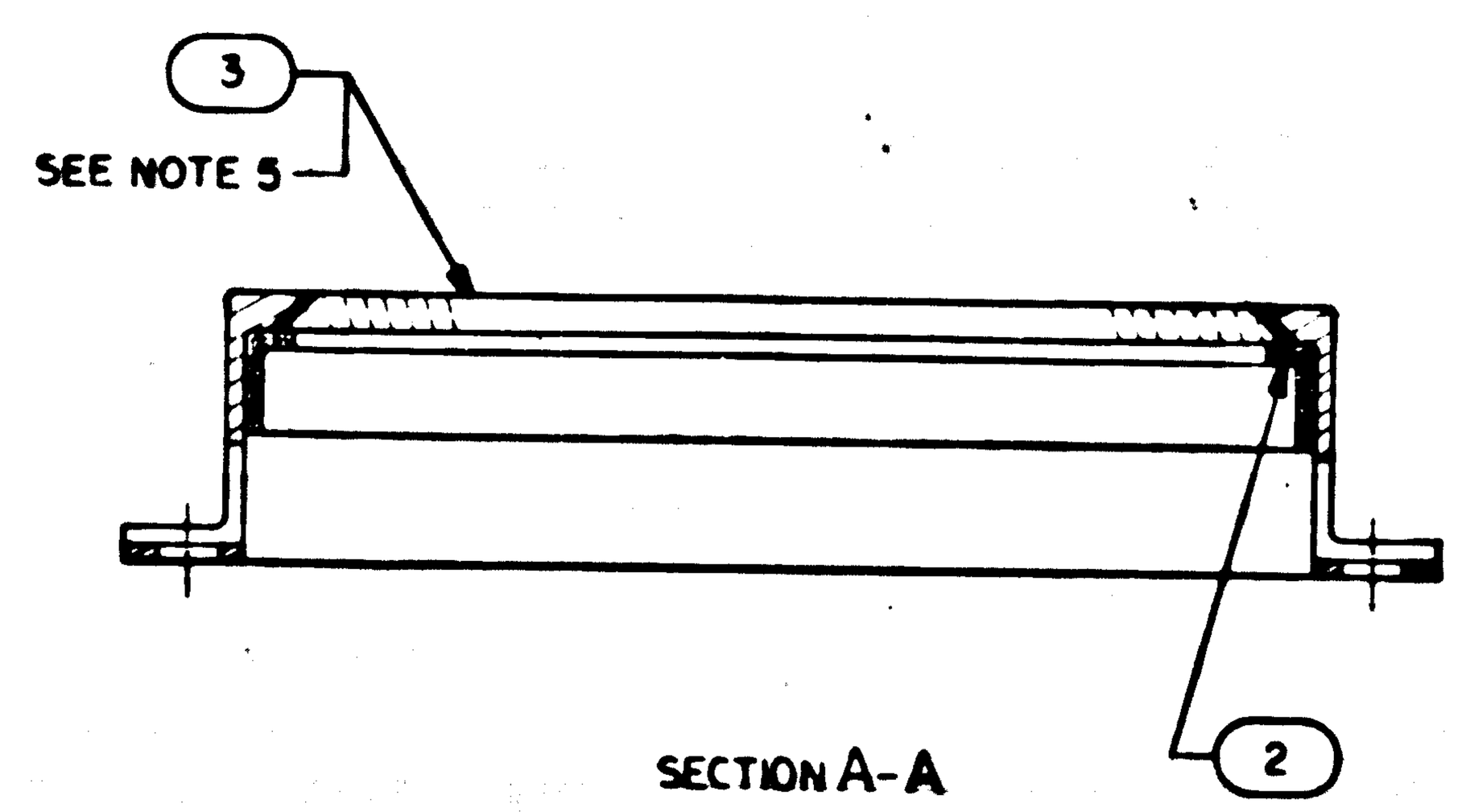
SPECIFICATION CONTROL DRAWING

CODE IDENT NO. 80230 | SIZE C | DRAWING NO. 1006353

SCALE NONE | SHEET 1 OF 1

1006353 B





SECTION A-A

NOTES:

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. IDENTIFY WITH PART NO. PER ND1002019
3. BOND FIND NO. 3 TO FIND NO. 1 AS INDICATED USING FIND NO. 4. CURE AT ROOM TEMPERATURE FOR 24 HOURS MIN
4. BOND FIND NO. 2 TO FIND NO. 1 AS INDICATED USING FIND NO. 5. CURE AT ROOM TEMPERATURE FOR 24 HOURS MIN
5. SURFACE OF FIND NO. 3 TO BE FLUSH TO .010 BELOW FACE SURFACE OF FIND NO. 1

REVISIONS DRR 35062

SYM	ZONE	DESCRIPTION	DR	CHK	DATE	APPROVED

QTY REQD	PART OR IDENTIFYING NO.	MATERIAL OR NOTES	NOMENCLATURE OR DESCRIPTION	FIND NO
A R	1006341		ADHESIVE SEALING	5
A R	1006338-002		ADHESIVE, SILICONE	4
1	2004698		PANEL, INDICATOR	3
1	2004141		GASKET, INDICATOR COVER	2
1	2004699		FRAME, INDICATOR COVER	1

011 LIST OF MATERIALS

NEXT ASSY	USED ON
2003899	

APPLICATION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES CAPACITOR VALUES ARE IN µf RESISTOR VALUES ARE IN OHMS TOLERANCES ON FRACTIONS DECIMALS ANGLES ± ± ±
DO NOT SCALE THIS DRAWING

MATERIAL

MIT INSTRUMENTATION LAB CAMBRIDGE MASS

DRAWN J. P. Leonard 3 NOV 67
CHECKED S. Hobson 6 NOV 67
APPROVED Eldon C Hall
APPROVED
CONTRACT NAS 9-497
APPROVED
APPROVED MSC
DATE

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

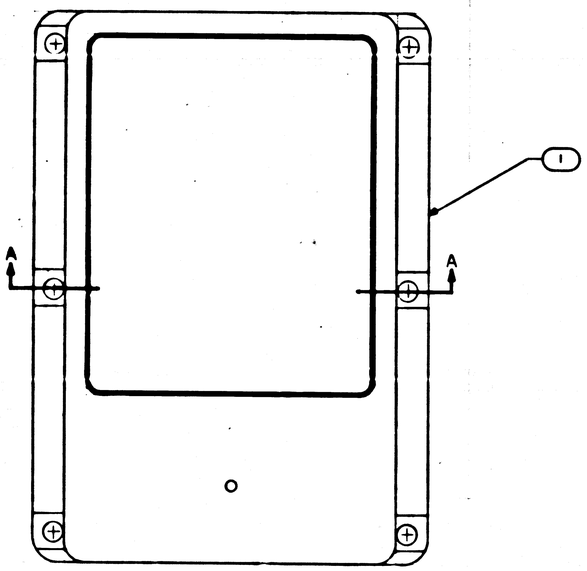
COVER ASSEMBLY
INDICATOR ALARM
AGC DSKY

CODE IDENT NO 80230 | SIZE D | DRAWING NO. 2003897

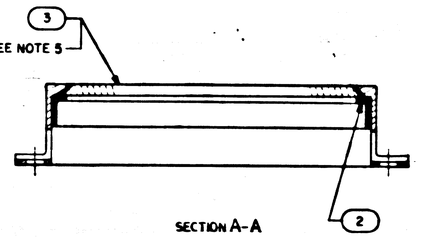
SCALE 2/1 | SHEET OF

2003897 | 1

REVISIONS TRW 35062						
SYM	ZONE	DESCRIPTION	DR	CHK	DATE	APPROVED
A		REVISED PER TLR 35650	[illegible]	E.A.	3/28/68	3/28/68



NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. IDENTIFY WITH PART NO. PER ND1002019
3. BOND FIND NO.2 AND FIND NO.3 TO FIND NO.1 AS INDICATED USING FIND NO.4. CURE AT ROOM TEMPERATURE FOR 24 HOURS MIN. PRIME AS REQ'D USING 1010900
~~4. BOND FIND NO.2 TO FIND NO.1 AS INDICATED USING FIND NO.5. CURE AT ROOM TEMPERATURE FOR 24 HOURS MIN.~~
5. SURFACE OF FIND NO. 3 TO BE FLUSH TO .010 BELOW FACE SURFACE OF FIND NO.1



SECTION A-A

QTY REQD	PART OR IDENTIFYING NO.	MATERIAL OR NOTES	NOMENCLATURE OR DESCRIPTION	FIND NO.
A R	1006341		ADHESIVE SEALING	5
A R	1006339-002		ADHESIVE, SILICONE	4
1	2004698		PANEL, INDICATOR	3
1	2004141		GASKET, INDICATOR COVER	2
1	2004699		FRAME, INDICATOR COVER	1

LIST OF MATERIALS

2003899		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES CAPACITOR VALUES ARE IN μf RESISTOR VALUES ARE IN OHMS TOLERANCES ON FRACTIONS ☆ DECIMALS ☆ ANGLES ☆ DO NOT SCALE THIS DRAWING	MIT INSTRUMENTATION LAB CAMBRIDGE, MASS.
NEXT ASSY	USED ON	MATERIAL	MANNED SPACECRAFT CENTER HOUSTON, TEXAS
APPLICATION			

DRAWN J.P. Lamond 3 NOV 67
CHECKED T. Nelson 6 NOV 67
APPROVED [illegible] 6 Nov 67
APPROVED [illegible] 7 NOV 67
CONTRACT NAS 9-153
APPROVED E.A. Laubach 7 Nov 67
APPROVED MSC [illegible] 11/9/67

COVER ASSEMBLY INDICATOR ALARM AGC DSKY

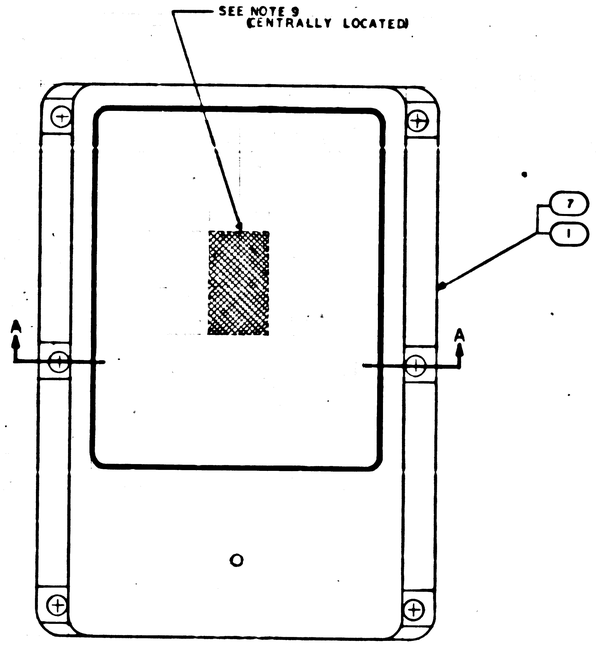
CODE IDENT NO	SIZE	DRAWING NO.
80230	D	2003897

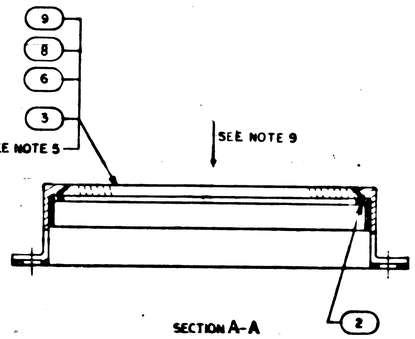
SCALE 2/1 | SHEET 1 OF 1

2003897 A

REVISIONS TDRR 35062					
SYM	ZONE	DESCRIPTION	DR	CHK	DATE	APPROVED
A		REVISED PER TDRR 35650	[illegible]	EW	3/22/68	[illegible]
B		REVISED PER TDRR 36458	[illegible]	[illegible]	7/8/68	[illegible]
C		REVISED PER TDRR 36657	[illegible]	EW	8/14/68	[illegible]

NOTE APPLICATION	
-011	1 THRU 5
-021	125689
-031	125789
-041	125789





SECTION A-A

NOTES:

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. IDENTIFY WITH PART NO. PER ND1002019
3. BOND FIND NO. 2 AND FIND NO. 3 TO FIND NO. 1 AS INDICATED USING FIND NO. 4. CURE AT ROOM TEMPERATURE FOR 24 HOURS MIN. PRIME AS REQD USING 1010900
~~4. BOND FIND NO. 2 TO FIND NO. 1 AS INDICATED USING FIND NO. 5. CURE AT ROOM TEMPERATURE FOR 24 HOURS MIN.~~
5. SURFACE OF FIND NO. 3, 6, 8 OR 9 TO BE FLUSH TO .010 BELOW FACE SURFACE OF FIND NO 1
6. BOND FIND NO 6 TO FIND NO. 1 AS INDICATED USING FIND NO. 4 CURE AT ROOM TEMPERATURE FOR 24 HOURS MIN.
7. BOND FIND NO. 8 OR FIND NO. 9 TO FIND NO. 7 AS INDICATED USING FIND NO. 4 CURE AT ROOM TEMPERATURE FOR 24 HOURS MIN.
8. COMPLETED ASSY SHALL BE TESTED IN ACCORDANCE WITH AND SHALL MEET WHEN MOUNTED TO SIMULATE ACTUAL APPLICATION:
   A. THE THERMAL REQUIREMENTS OF PARA 3.13 LESS REQUIREMENTS OF PARA 3.12 OF PS 2003899
   B. THE VIBRATION REQUIREMENTS OF PARA 3.14.1 OF PS 2003899
9. AFTER TESTING PER NOTE 8 THE FOLLOWING TEST SHALL BE PERFORMED:
   A. PUSH FORCE-A10LB LOAD SHALL BE APPLIED TO THE AREA OF THE GLASS INDICATED IN THE DIRECTION INDICATED. ANY VISUAL DEGRADATION OF THE ADHESIVE QUALITIES OF OF FIND NO. 4 IS CAUSE FOR REJECTION

QTY REQD	QTY REQD	QTY REQD	QTY MFGD	PART OR IDENTIFYING NO.	MATERIAL OR NOTES	NOMENCLATURE OR DESCRIPTION	FIND NO.
1	–	–	–	2004743-003		PANEL, INDICATOR	9
–	1	–	–	2004743-002		PANEL, INDICATOR	5
1	1	–	–	2004699-001		FRAME, INDICATOR COVER	7
–	–	1	–	2004743-001		PANEL, INDICATOR	6
–	–	–	AR	1006341		ADHESIVE SEALING	8
AR	AR	AR	AR	1006338-002		ADHESIVE, SILICONE	4
–	–	–	1	2004698		PANEL, INDICATOR	3
–	–	–	1	2004741		GASKET, INDICATOR COVER	2
–	–	1	1	2004699-000		FRAME, INDICATOR COVER	1
QTY REQD	QTY REQD	QTY REQD	QTY MFGD	PART OR IDENTIFYING NO.	MATERIAL OR NOTES	NOMENCLATURE OR DESCRIPTION	FIND NO.

C4 C3 C2 C1

LIST OF MATERIALS

2003839	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
CAPACITOR VALUES ARE IN μf
RESISTOR VALUES ARE IN OHMS
TOLERANCES ON
FRACTIONS DECIMALS ANGLES
± ± ±
DO NOT SCALE THIS DRAWING
MATERIAL

M I T
INSTRUMENTATION LAB
CAMBRIDGE MASS

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

DRAWN [illegible] 3 NOV 67
CHECKED [illegible] 6 FEB 68
APPROVED [illegible] 6 March 68
APPROVED [illegible] 6 Mar 68
APPROVED [illegible]
APPROVED [illegible]
APPROVED MSC [illegible]

COVER ASSEMBLY

AGC DSKY

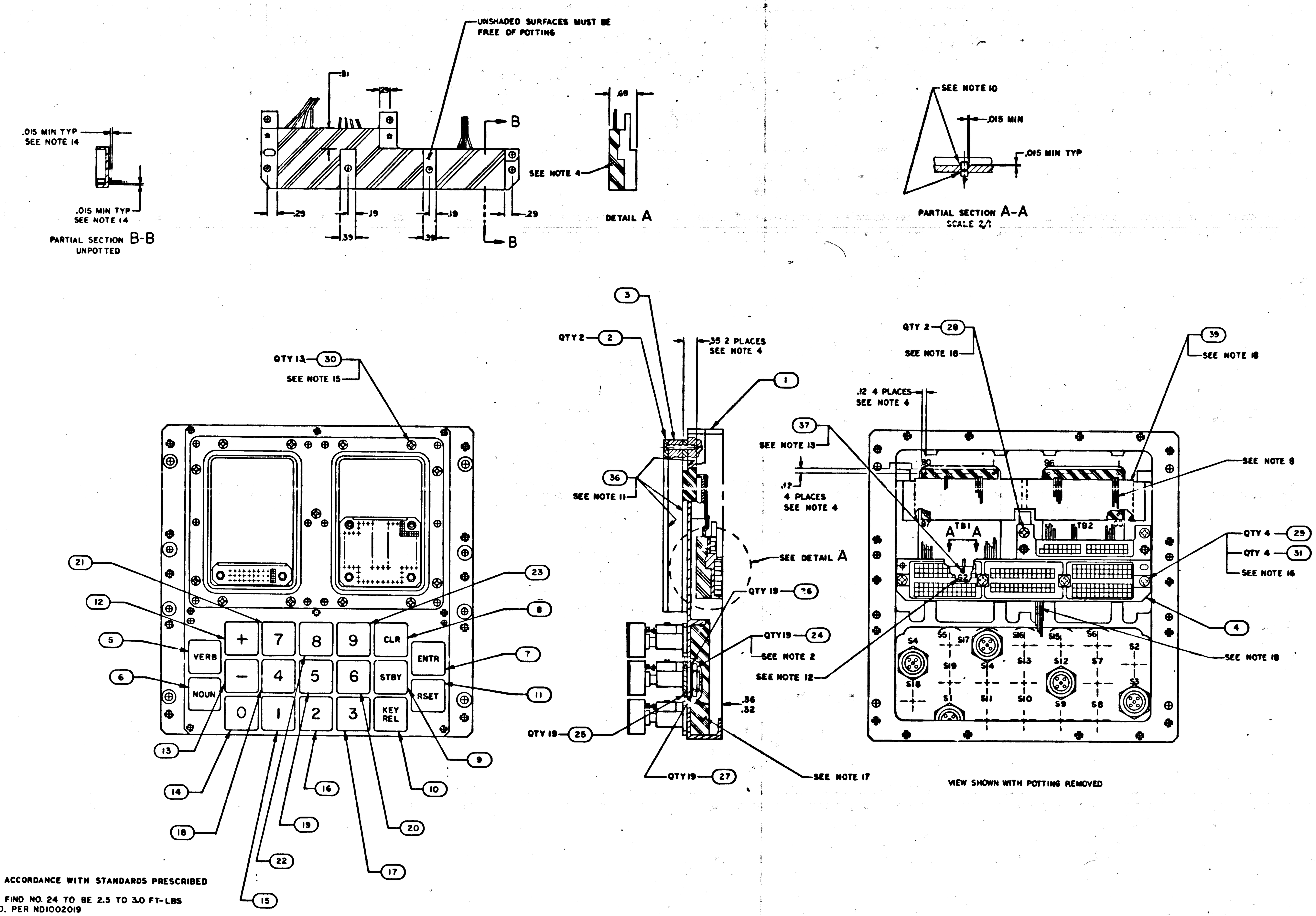
CODE IDENT NO	SIZE	DRAWING NO.
80230	D	2003897

DATE
SCALE 2/1
SHEET 1 OF 1

2003897 C

2003949 A

SYM	ZONE	DESCRIPTION	REVISIONS
A		REVISED PER TDRR 26856	



NOTES

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MOUNTING TORQUE FOR FIND NO. 24 TO BE 2.5 TO 3.0 FT-LBS
3. IDENTIFY WITH PART NO. PER ND1002019
4. ENCAPSULATE INDICATED AREAS PER ND1002236
5. SOLDER PER ND 1002071 USING SOLDER PER ND1002075
6. WELD PER ND1002005
7. AR DENOTES AS REQUIRED
8. BOND FIND NO. 32, 33, 38, 40 & 41 TO FIND NO. 39 PER ND1002004, TYPE IX
9. DRESS AND TRIM AT ASSEMBLY USING FIND NO. 34
10. SEAL FIND NO. 37 TO FIND NO. 1 PER ND1002004 TYPE VI
11. APPLY FIND NO. 36 TO INDICATED SURFACES OF FIND NO. 2. DO NOT APPLY TO BONDED RUBBER
12. MARK .07/.10 HIGH BLACK CHARACTERS PER ND1002019 AND ND1002122 TYPE II CLASS 2, USING MARKING INK 1006271-11
13. MOUNTING TORQUE FOR FIND NO. 37 TO BE 15-20 INCH OUNCES
14. SEAL INSULATORS ON FIND NO. 4 PER ND1002004 TYPE VI
15. MOUNTING TORQUE FOR FIND NO. 30 TO BE 3.5-4.5 INCH POUNDS
16. MOUNTING TORQUE FOR FIND NO. 28 AND FIND NO. 29 TO BE 8 TO 9 INCH POUNDS
17. ENCAPSULATE PER ND
18. BOND FIND NO. 39 & WIRES FROM S1 THRU S19 TO FIND NO. 1 PER ND1002004, TYPE IX

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
X	2005953	INTERCONNECTING DIAGRAM	REF
AR	1010807-22	WIRE INSULATED	41
AR	1010416-14	WIRE, INSULATED	40
1	2004898	SUPPORT, WIRE	39
AR	1010416-13	WIRE, INSULATED	38
1	2004039	TERMINAL, THREADED	37
AR	1006879	SILICONE COMPOUND	36
AR	1010416-15	WIRE, INSULATED	35
AR	1012507-003	TAPE, LACING	34
AR	1010416-20	WIRE, INSULATED	33
AR	1010848-1	WIRE, INSULATED	32
4	NAS620-6L	WASHER, FLAT	31
13	MS51959-20	SCREW, FLAT HD, CROSS RECESSED	30
4	MS51957-30	SCREW, PAN HD, CROSS RECESSED	29
2	MS51959-28	SCREW, FLAT HD, CROSS RECESSED	28
19	1010635-003	WASHER, LOCK	27
19	2004940-001	WASHER, PLAIN	26
19	1000159-18	O RING SEAL	25
19	2004942	NUT, HEX	24
1	2003984-211	SWITCH, ASSEMBLY PUSHBUTTON	23
1	-191		22
1	-181		21
1	-171		20
1	-161		19
1	-151		18
1	-141		17
1	-131		16
1	-121		15
1	-111		14
1	-091		13
1	-081		12
1	-071		11
1	-061		10
1	-051		9
1	-041		8
1	-031		7
1	-021		6
1	2003984-011	SWITCH, ASSEMBLY PUSHBUTTON	5
1	2003948-011	CONNECTOR, PLATE ASSEMBLY	4
1	2003959-011	ADAPTER, PLATE ASSEMBLY	3
2	1006351	GASKET, PREFORMED	2
1	2004968-011	HOUSING, FRONT	1

011 LIST OF MATERIALS

NEXT ASSY	USED ON
2003950	

APPLICATION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
CAPACITOR VALUES ARE IN μf
RESISTOR VALUES ARE IN OHMS
TOLERANCES ON FRACTIONS ± DECIMALS ±.01 ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL

MIT INSTRUMENTATION LAB CAMBRIDGE, MASS

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

DRAWN J. C. Leonard
CHECKED
APPROVED
APPROVED
APPROVED MIT
APPROVED MSC A. S. Metzger

FRONT HOUSING ASSEMBLY

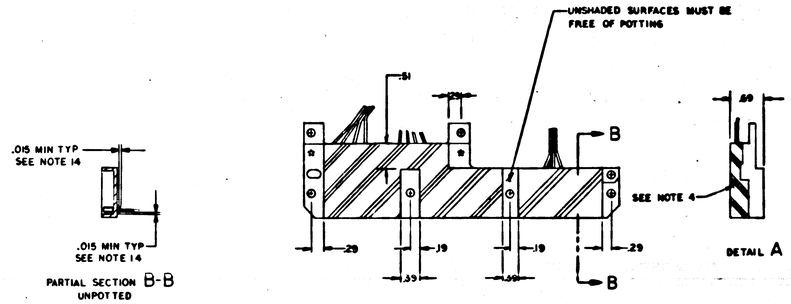
AGC DSKY

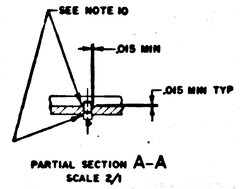
CODE IDENT NO. 80230 SIZE J DRAWING NO. 2003949

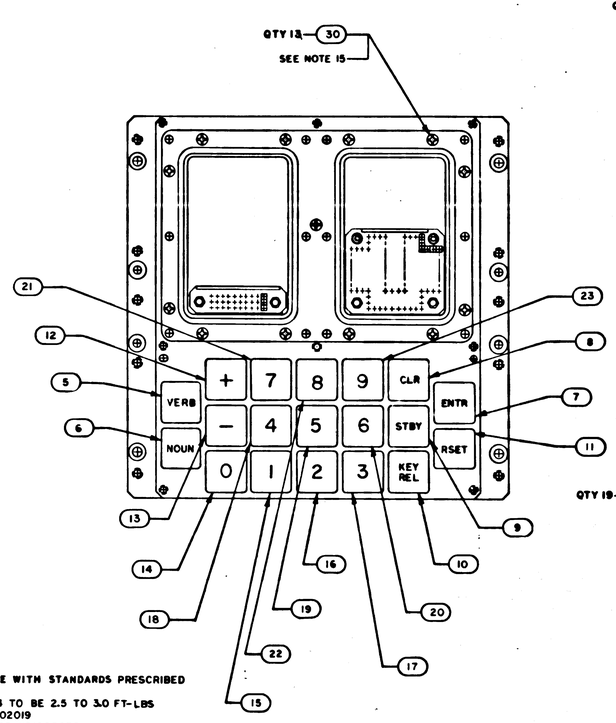
SCALE 1/1 SHEET 1 OF 3

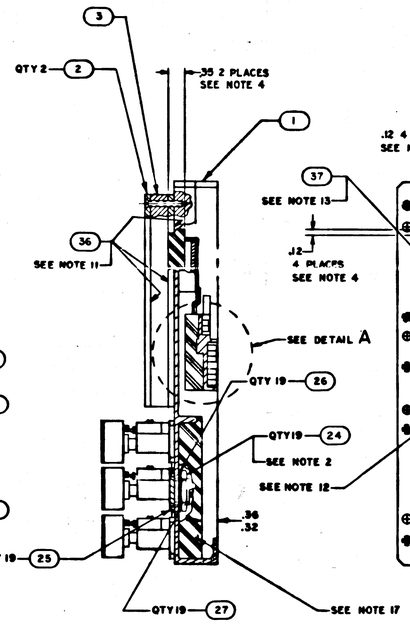
2003949 A

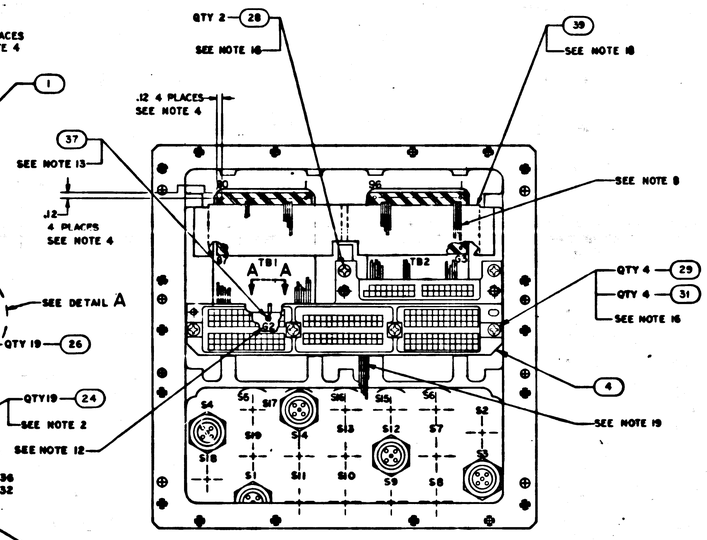
REVISIONS					
SYM	ZONE	DESCRIPTION	DR	CHK	DATE
A		REVISED PER TDRR 26856	SFZ	[illegible]	[illegible]
B		REVISED PER TDRR 27913	JFT	[illegible]	[illegible]











NOTES

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MOUNTING TORQUE FOR FIND NO. 24 TO BE 2.5 TO 3.0 FT-LBS
3. IDENTIFY WITH PART NO. PER ND1002019
4. ENCAPSULATE INDICATED AREAS PER ND1002236
5. SOLDER PER ND 1002071 USING SOLDER PER ND1002075
6. WELD PER ND1002005
7. AR DENOTES AS REQUIRED
8. BOND FIND NO. 32, 33, 36, 40 & 41 TO FIND NO. 39 PER ND1002009, METHOD C
9. DRESS AND TRIM AT ASSEMBLY USING FIND NO. 34
10. SEAL FIND NO. 37 TO FIND NO. 1 PER ND1002004 TYPE VI
11. APPLY FIND NO. 36 TO INDICATED SURFACES OF FIND NO. 2. DO NOT APPLY TO BONDED RUBBER
12. MARK .07/.10 HIGH BLACK CHARACTERS PER ND1002019 AND ND1002122 TYPE II CLASS 2, USING MARKING INK 1006271-11
13. MOUNTING TORQUE FOR FIND NO. 37 TO BE 15-20 INCH OUNCES
14. SEAL INSULATORS ON FIND NO. 4 PER ND1002004 TYPE VI
15. MOUNTING TORQUE FOR FIND NO. 30 TO BE 3.5-4.5 INCH POUNDS
16. MOUNTING TORQUE FOR FIND NO. 28 AND FIND NO. 29 TO BE 8 TO 9 INCH POUNDS
17. ENCAPSULATE INDICATED AREA PER ND1002295
18. BOND FIND NO. 39 TO FIND NO. 1 PER ND1002004, TYPE III
19. BOND FIND NO. 33, 38 AND 40 TO FIND NO. 1 PER ND1002009, METHOD C

QTY AR/DR	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	REF NO.
	2005955	INTERCONNECTING DIAGRAM	REF
AR	1010807-22	WIRE, INSULATED	41
AR	1010416-14	WIRE, INSULATED	40
1	2004898	SUPPORT, WIRE	39
AR	1010416-13	WIRE, INSULATED	38
1	2004039	TERMINAL, THREADED	37
AR	1006879	SILICONE COMPOUND	36
AR	1010416-15	WIRE, INSULATED	35
AR	1012507-003	TAPE, LACING	34
AR	1010416-20	WIRE, INSULATED	33
AR	1010848-1	WIRE, INSULATED	32
4	NAS620-6L	WASHER, FLAT	31
13	MS51959-20	SCREW, FLAT HD, CROSS RECESSED	30
4	MS51957-30	SCREW, PAN HD, CROSS RECESSED	29
2	MS51959-28	SCREW, FLAT HD, CROSS RECESSED	28
19	1010635-003	WASHER, LOCK	27
19	2004940-001	WASHER, PLAIN	26
19	1000159-18	O RING SEAL	25
19	2004942	NUT, HEX	24
1	2003984-211	SWITCH, ASSEMBLY PUSHBUTTON	23
1	-191		22
1	-181		21
1	-171		20
1	-161		19
1	-151		18
1	-141		17
1	-131		16
1	-121		15
1	-111		14
1	-091		13
1	-081		12
1	-071		11
1	-061		10
1	-051		9
1	-041		8
1	-031		7
1	-021		6
1	2003984-011	SWITCH, ASSEMBLY PUSHBUTTON	5
1	2003948-011	CONNECTOR, PLATE ASSEMBLY	4
1	2003959-011	ADAPTER, PLATE ASSEMBLY	3
2	1006351	GASKET, PREFORMED	2
1	2004968-011	HOUSING, FRONT	1

2003950	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. CAPACITOR VALUES ARE IN μF. RESISTOR VALUES ARE IN OHMS. TOLERANCES ON FRACTIONS ±1/64, DECIMALS ±.01, ANGLES ±1°. DO NOT SCALE THIS DRAWING. MATERIAL

MIT INSTRUMENTATION LAB CAMBRIDGE, MASS.

DRAWN [illegible] DATE [illegible]
CHECKED [illegible] DATE [illegible]
APPROVED [illegible] DATE [illegible]
APPROVED Cadman, Ward DATE [illegible]
APPROVED MIT [illegible] DATE [illegible]
APPROVED NASA [illegible] DATE [illegible]

MFR OF MATERIALS

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

FRONT HOUSING ASSEMBLY, AGC DSKY

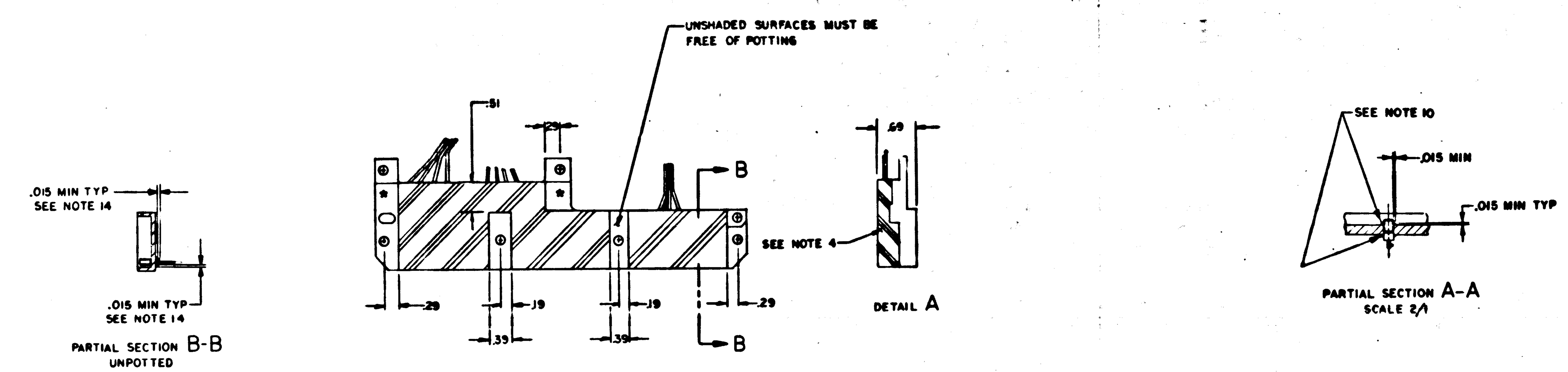
CODE IDENT NO. 80230 | SIZE J | DRAWING NO. 2003949

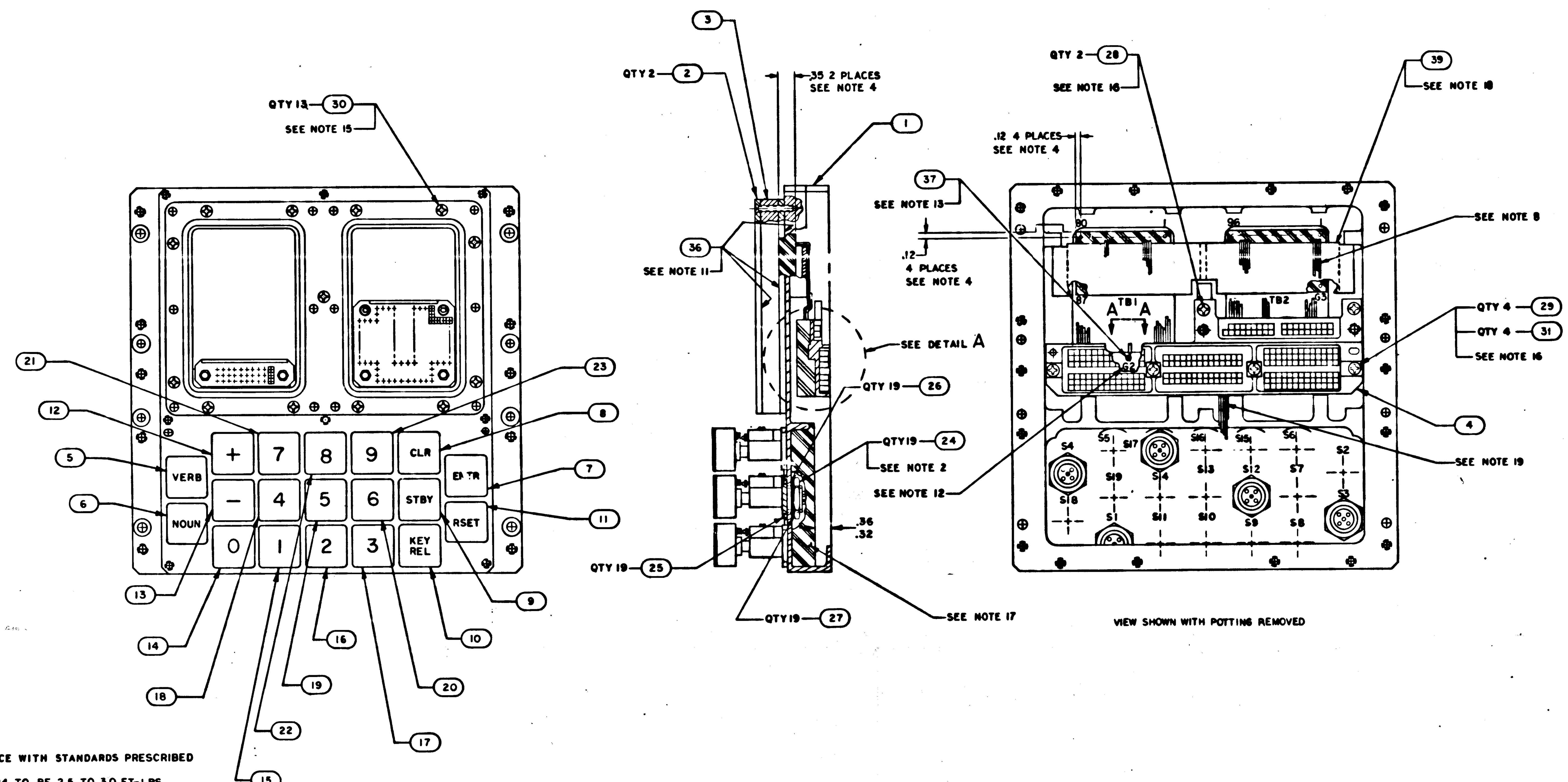
SCALE 1/1 | SHEET 1 OF 3

	2003949	C

REVISIONS 26205

SYM	ZONE	DESCRIPTION	DR	CHK	DATE	APPROVED
A		REVISED PER TDRR 26856				
B		REVISED PER TDRR 27913				
C		REVISED PER TDRR 28178				





NOTES

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MOUNTING TORQUE FOR FIND NO. 24 TO BE 2.5 TO 3.0 FT-LBS
3. IDENTIFY WITH PART NO. PER ND1002019
4. ENCAPSULATE INDICATED AREAS PER ND1002236
5. SOLDER PER ND 1002071 USING SOLDER PER ND1002075
6. WELD PER ND1002005
7. AR DENOTES AS REQUIRED
8. BOND FIND NO. 32,33,38, 40 & 41 TO FIND NO. 39 PER ND1002009, METHOD C
9. DRESS AND TRIM AT ASSEMBLY USING FIND NO. 34
10. SEAL FIND NO.37 TO FIND NO.1 PER ND1002004 TYPE VI
11. APPLY FIND NO.36 TO INDICATED SURFACES OF FIND NO. 2. DO NOT APPLY TO BONDED RUBBER
12. MARK .07/.10 HIGH BLACK CHARACTERS PER ND1002019 AND ND1002122 TYPE II CLASS 2, USING MARKING INK 1006271-11
13. MOUNTING TORQUE FOR FIND NO.37 TO BE 15-20 INCH OUNCES
14. SEAL INSULATORS ON FIND NO. 4 PER ND1002004 TYPE VI
15. MOUNTING TORQUE FOR FIND NO. 30 TO BE 3.5-4.5 INCH POUNDS
16. MOUNTING TORQUE FOR FIND NO. 28 AND FIND NO. 29 TO BE 8 TO 9 INCH POUNDS
17. ENCAPSULATE INDICATED AREA PER ND1002295
18. BOND FIND NO. 39 TO FIND NO.1 PER ND1002004, TYPE IV
19. BOND FIND NO. 33, 38 AND 40 TO FIND NO.1 PER ND1002009, METHOD C

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
X	2005953	INTERCONNECTING DIAGRAM	REF
AR	1010807-22	WIRE INSULATED	41
AR	1010416-14	WIRE, INSULATED	40
1	2004898	SUPPORT, WIRE	39
AR	1010416-13	WIRE, INSULATED	38
1	2004039	TERMINAL, THREADED	37
AR	1006879	SILICONE COMPOUND	36
AR	1010416-15	WIRE, INSULATED	35
AR	1012507-003	TAPE, LACING	34
AR	1010416-20	WIRE, INSULATED	33
AR	1010848-1	WIRE, INSULATED	32
4	NAS620-6L	WASHER, FLAT	31
13	MS51959-20	SCREW, FLAT HD, CROSS RECESSED	30
4	MS51957-30	SCREW, PAN HD, CROSS RECESSED	29
2	MS51959-28	SCREW, FLAT HD, CROSS RECESSED	28
19	1010635-003	WASHER, LOCK	27
19	2004940-001	WASHER, PLAIN	26
19	1000159-18	O RING SEAL	25
19	2004942	NUT, HEX	24
1	2003984-211	SWITCH, ASSEMBLY PUSHBUTTON	23
1	-191		22
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1	-141		17
1	-131		16
1	-121		15
1	-111		14
1	-091		13
1	-081		12
1	-071		11
1	-061		10
1	-051		9
1	-041		8
1	-031		7
1	-021		6
1	2003984-011	SWITCH, ASSEMBLY PUSHBUTTON	5
1	2003948-011	CONNECTOR, PLATE ASSEMBLY	4
1	2003959-011	ADAPTER, PLATE ASSEMBLY	3
2	1006351	GASKET, PREFORMED	2
1	2004968-021	HOUSING, FRONT	1
011	LIST OF MATERIALS		

NEXT ASSY	USED ON
2003950	
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
CAPACITOR VALUES ARE IN μf
RESISTOR VALUES ARE IN OHMS
TOLERANCES ON
FRACTIONS ± DECIMALS ±.01 ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL

MIT INSTRUMENTATION LAB
CAMBRIDGE, MASS

DRAWN J. P. Leonard
CHECKED J.C. Jenkins
APPROVED
APPROVED
APPROVED MIT
APPROVED MSC A. S. METZGER
DATE

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

FRONT HOUSING ASSEMBLY
AGC DSKY

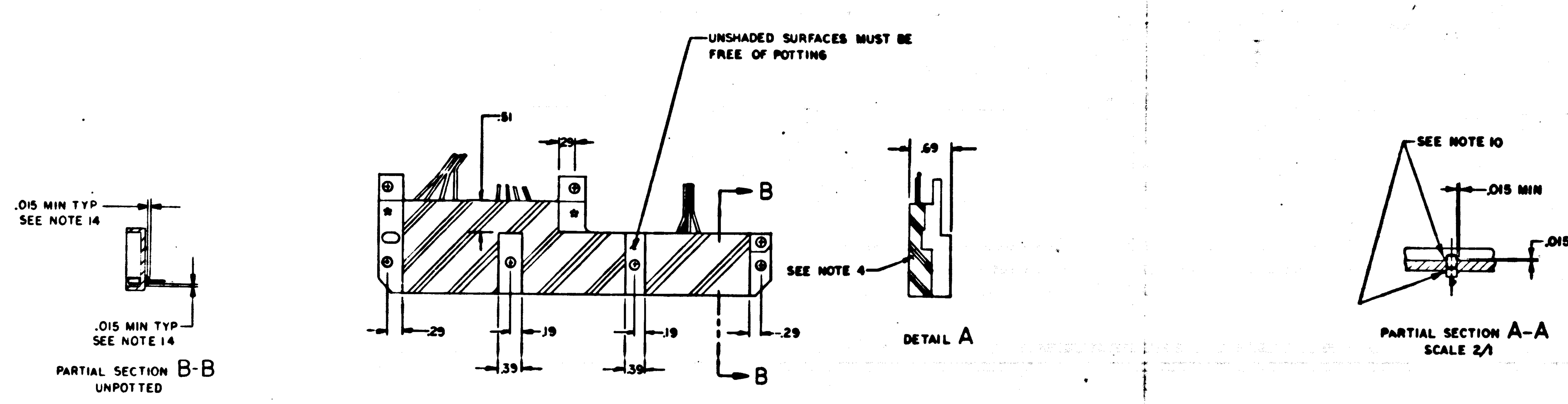
CODE IDENT NO.	SIZE	DRAWING NO.
80230	J	2003949
SCALE 1/1		SHEET 1 OF 1

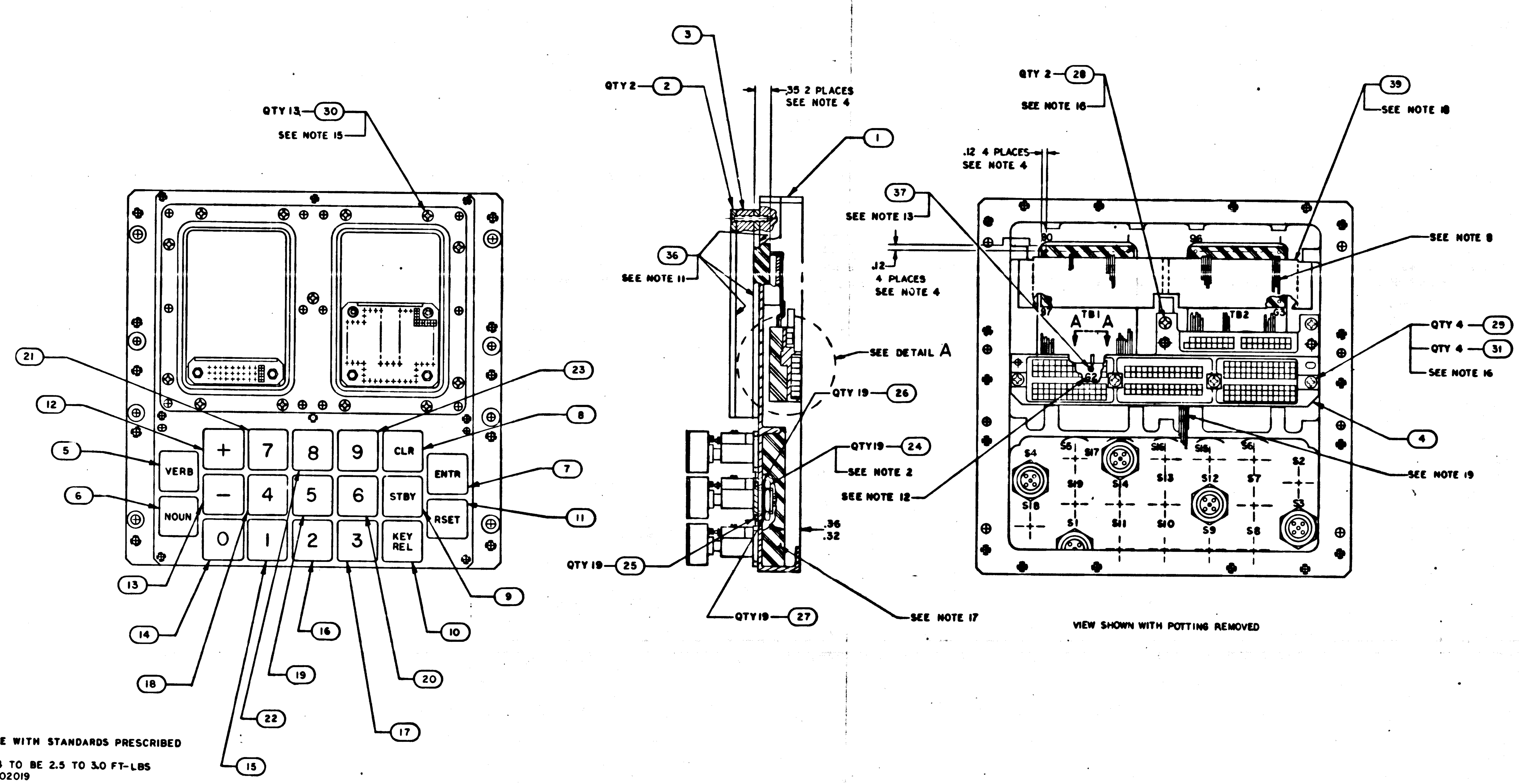
MASTER

2003949	C

2003949 D

SYM	ZONE	DESCRIPTION	DR	CHK	DATE	APPROVED
		REVISION:				
A		REVISED PER TDRR 26856				
B		REVISED PER TDRR 27913				
C		REVISED PER TDRR 28178				
D		REVISED PER TDRR 29705				





NOTES

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MOUNTING TORQUE FOR FIND NO. 24 TO BE 2.5 TO 3.0 FT-LBS
3. IDENTIFY WITH PART NO. PER ND1002019
4. ENCAPSULATE INDICATED AREAS PER ND1002236
5. SOLDER PER ND 1002071 USING SOLDER PER ND1002075
6. WELD PER ND1002005
7. AR DENOTES AS REQUIRED
8. BOND FIND NO. 32,33,38, 40 & 41 TO FIND NO. 39 PER ND1002009, METHOD C
9. DRESS AND TRIM AT ASSEMBLY USING FIND NO. 34
10. SEAL FIND NO.37 TO FIND NO.1 PER ND1002004 TYPE VI
11. APPLY FIND NO.36 TO INDICATED SURFACES OF FIND NO. 2. DO NOT APPLY TO BONDED RUBBER
12. MARK .07/.10 HIGH BLACK CHARACTERS PER ND1002019 AND ND1002122 TYPE II CLASS 2, USING MARKING INK 1006271-11
13. MOUNTING TORQUE FOR FIND NO.37 TO BE 15-20 INCH OUNCES
14. SEAL INSULATORS ON FIND NO. 4 PER ND1002004 TYPE VI
15. MOUNTING TORQUE FOR FIND NO.30 TO BE 3.5-4.5 INCH POUNDS
16. MOUNTING TORQUE FOR FIND NO. 28 AND FIND NO. 29 TO BE 8 TO 9 INCH POUNDS
17. ENCAPSULATE INDICATED AREA PER ND1002295, EXCEPT CURE AT 155±5°F FOR 2 HOURS MINIMUM
18. BOND FIND NO. 39 TO FIND NO.1 PER ND1002004, TYPE IV
19. BOND FIND NO. 33, 38 AND 40 TO FIND NO.1 PER ND1002009, METHOD C
20. THIS ASSEMBLY NOT TO EXCEED 160°F IN MANUFACTURING PROCESS

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
X	2005953	INTERCONNECTING DIAGRAM	REF
AR	1010807-22	WIRE INSULATED	41
AR	1010416-14	WIRE, INSULATED	40
1	2004898	SUPPORT, WIRE	39
AR	1010416-13	WIRE, INSULATED	38
1	2004039	TERMINAL, THREADED	37
AR	1006879	SILICONE COMPOUND	36
AR	1010416-15	WIRE, INSULATED	35
AR	1012507-003	TAPE, LACING	34
AR	1010416-20	WIRE, INSULATED	33
AR	1010848-1	WIRE, INSULATED	32
4	NAS620-6L	WASHER, FLAT	31
13	MS51959-20	SCREW, FLAT HD, CROSS RECESSED	30
4	MS51957-30	SCREW, PAN HD, CROSS RECESSED	29
2	MS51959-28	SCREW, FLAT HD, CROSS RECESSED	28
19	1010635-003	WASHER, LOCK	27
19	2004940-001	WASHER, PLAIN	26
19	1000159-18	O RING SEAL	25
19	2004942	NUT, HEX	24
1	2003984-211	SWITCH, ASSEMBLY PUSHBUTTON	23
1	-191		22
1	-181		21
1	-171		20
1	-161		19
1	-151		18
1	-141		17
1	-131		16
1	-121		15
1	-111		14
1	-091		13
1	-081		12
1	-071		11
1	-061		10
1	-051		9
1	-041		8
1	-031		7
1	-021		6
1	2003984-011	SWITCH, ASSEMBLY PUSHBUTTON	5
1	2003948-011	CONNECTOR, PLATE ASSEMBLY	4
1	2003959-011	ADAPTER, PLATE ASSEMBLY	3
2	1006351	GASKET, PREFORMED	2
1	2004968-021	HOUSING, FRONT	1

C11 LIST OF MATERIALS

20C3950	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
CAPACITOR VALUES ARE IN μf
RESISTOR VALUES ARE IN OHMS
TOLERANCES ON
FRACTIONS ± DECIMALS ±.01 ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL

MIT INSTRUMENTATION LAB

DRAWN / CHECKED / APPROVED / APPROVED / APPROVED MIT / APPROVED MSC / DATE

MANNED SPACECRAFT CENTER

FRONT HOUSING ASSEMBLY

AGC DSKY

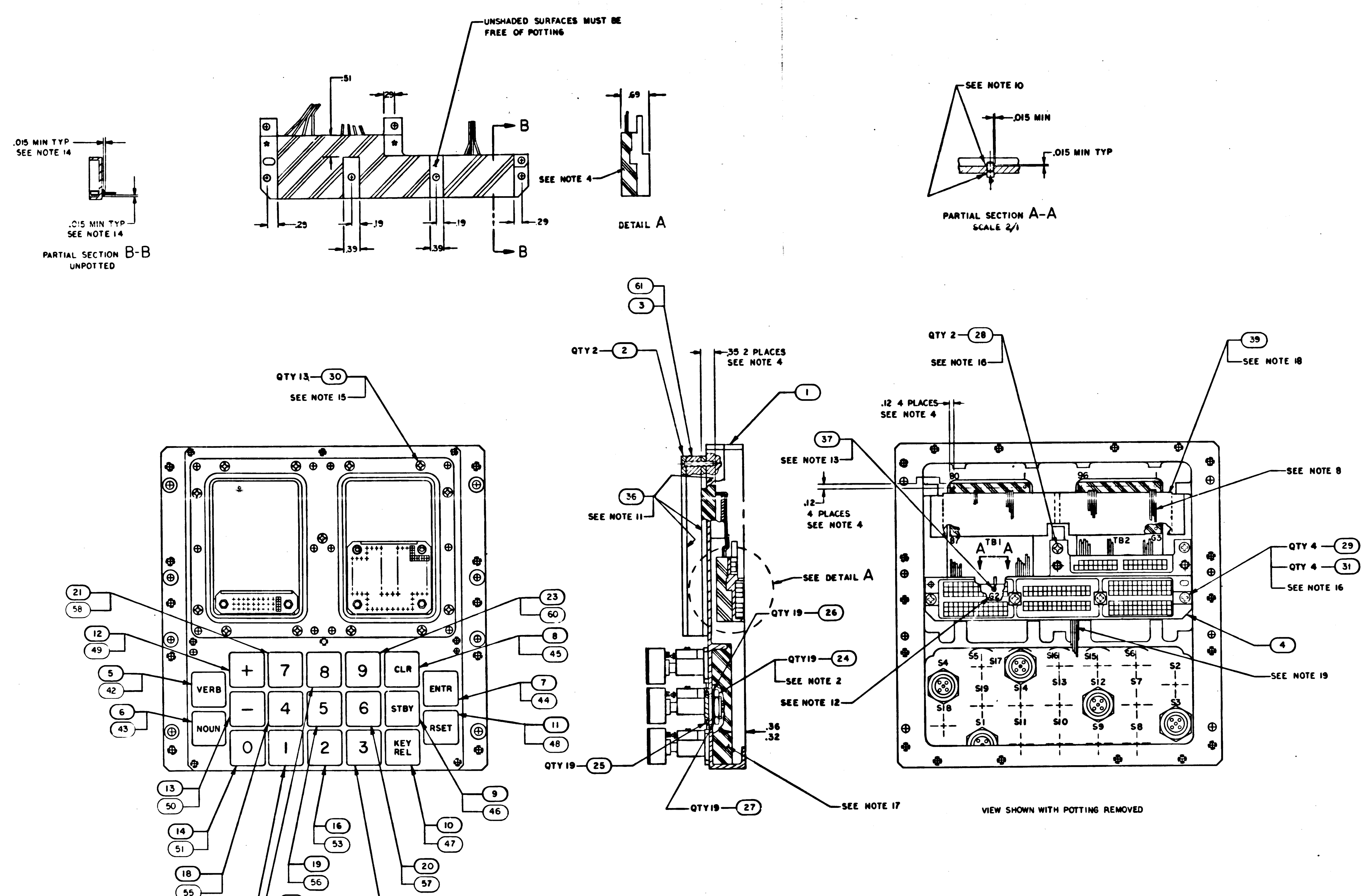
CODE IDENT NO.	SIZE	DRAWING NO.
80230	J	2003949

SCALE 1/1 SHEET 1 OF 3

2003949 D

2003949 E

SYM	ZONE	DESCRIPTION	DR	CHK	DATE	APPROVED
A		REVISED PER TDRR 26856				
B		REVISED PER TDRR 27913				
C		REVISED PER TDRR 28178				
D		REVISED PER TDRR 29705				
E		REVISED PER TDRR 32580				



NOTES

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MOUNTING TORQUE FOR FIND NO. 24 TO BE 2.5 TO 3.0 FT-LBS
3. IDENTIFY WITH PART NO. PER ND1002019
4. ENCAPSULATE INDICATED AREAS PER ND1002236
5. SOLDER PER ND 1002071 USING SOLDER PER ND1002075
6. WELD PER ND1002005
7. AR DENOTES AS REQUIRED
8. BOND FIND NO. 32,33,38, 40 & 41 TO FIND NO. 39 PER ND1002009, METHOD C
9. DRESS AND TRIM AT ASSEMBLY USING FIND NO. 34
10. SEAL FIND NO.37 TO FIND NO.1 PER ND1002004 TYPE VI
11. APPLY FIND NO.36 TO INDICATED SURFACES OF FIND NO. 2. DO NOT APPLY TO BONDED RUBBER
12. MARK .07/.10 HIGH BLACK CHARACTERS PER ND1002019 AND ND1002122 TYPE II CLASS 2, USING MARKING INK 1006271-11
13. MOUNTING TORQUE FOR FIND NO.37 TO BE 15-20 INCH OUNCES
14. SEAL INSULATORS ON FIND NO. 4 PER ND1002004 TYPE VI
15. MOUNTING TORQUE FOR FIND NO.30 TO BE 3.5-4.5 INCH POUNDS
16. MOUNTING TORQUE FOR FIND NO. 28 AND FIND NO. 29 TO BE 8 TO 9 INCH POUNDS
17. ENCAPSULATE INDICATED AREA PER ND1002295, EXCEPT CURE AT 155±5°F FOR 2 HOURS MINIMUM
18. BOND FIND NO. 39 TO FIND NO.1 PER ND1002004, TYPE IV
19. BOND FIND NO. 33, 38 AND 40 TO FIND NO.1 PER ND1002009, METHOD C
20. THIS ASSEMBLY NOT TO EXCEED 160°F IN MANUFACTURING PROCESS

QTY REQD -021	QTY REQD 011	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
1	—	2003884-011	ADAPTER PLATE ASSEMBLY	61
1	—	2003875-211	SWITCH ASSEMBLY, PUSHBUTTON	60
1	—	-191		59
1	—	-181		58
1	—	-171		57
1	—	-161		56
1	—	-151		55
1	—	-141		54
1	—	-131		53
1	—	-121		52
1	—	-111		51
1	—	-091		50
1	—	-081		49
1	—	-071		48
1	—	-061		47
1	—	-051		46
1	—	-041		45
1	—	-031		44
1	—	-021		43
1	—	2003875-011	SWITCH ASSEMBLY, PUSHBUTTON	42
		2005953	INTERCONNECTING DIAGRAM	REF
AR	AR	1010807-22	WIRE INSULATED	41
AR	AR	1010416-14	WIRE, INSULATED	40
1	1	2004898	SUPPORT, WIRE	39
AR	AR	1010416-13	WIRE, INSULATED	38
1	1	2004039	TERMINAL, THREADED	37
AR	AR	1006879	SILICONE COMPOUND	36
AR	AR	1010416-15	WIRE, INSULATED	35
AR	AR	1012507-003	TAPE, LACING	34
AR	AR	1010416-20	WIRE, INSULATED	33
AR	AR	1010848-1	WIRE, INSULATED	32
4	4	NAS620-6L	WASHER, FLAT	31
13	13	MS51959-20	SCREW, FLAT HD, CROSS RECESSED	30
4	4	MS51957-30	SCREW, PAN HD, CROSS RECESSED	29
2	2	MS51959-28	SCREW, FLAT HD, CROSS RECESSED	28
19	19	1010635-003	WASHER, LOCK	27
19	19	2004940-001	WASHER, PLAIN	26
19	19	1000159-18	O RING SEAL	25
19	19	2004942	NUT, HEX	24
—	1	2003984-211	SWITCH ASSEMBLY, PUSHBUTTON	23
—	1	-191		22
—	1	-181		21
—	1	-171		20
—	1	-161		19
—	1	-151		18
—	1	-141		17
—	1	-131		16
—	1	-121		15
—	1	-111		14
—	1	-091		13
—	1	-081		12
—	1	-071		11
—	1	-061		10
—	1	-051		9
—	1	-041		8
—	1	-031		7
—	1	-021		6
—	1	2003984-011	SWITCH ASSEMBLY, PUSHBUTTON	5
1	1	2003948-011	CONNECTOR, PLATE ASSEMBLY	4
—	1	2003959-011	ADAPTER, PLATE ASSEMBLY	3
2	2	1006351	GASKET, PREFORMED	2
1	1	2004968-021	HOUSING, FRONT	1

LIST OF MATERIALS

NEXT ASSY	USED ON
2003994	
2003950	

APPLICATION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
CAPACITOR VALUES ARE IN μf
RESISTOR VALUES ARE IN OHMS
TOLERANCES ON FRACTIONS ± DECIMALS ±.01 ANGLES ±
DO NOT SCALE THIS DRAWING

MATERIAL

MIT INSTRUMENTATION LAB CAMBRIDGE MASS

DRAWN J. P. Leonard
CHECKED J C Jenkins
APPROVED
APPROVED
APPROVED MIT
APPROVED MSC

MANNED SPACECRAFT CENTER HOUSTON TEXAS

FRONT HOUSING ASSEMBLY

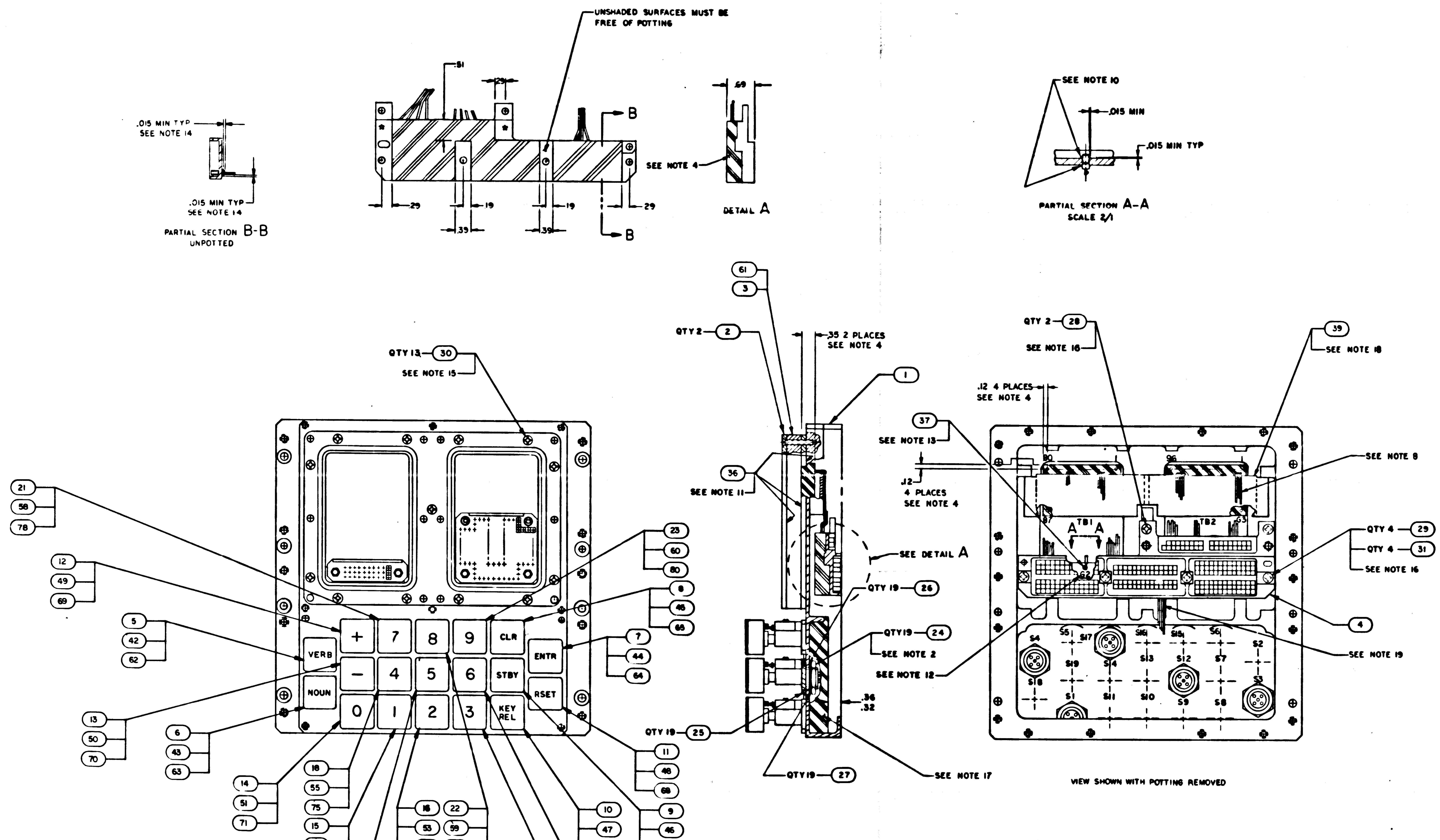
AGC DSKY

CODE IDENT NO 80230 | SIZE J | DRAWING NO. 2003949

SCALE 1/1 | SHEET 1 OF 3

2003949 E

REV	ZONE	DESCRIPTION	DR	CK	DATE	APPROVED
A		REVISED PER TDRR 26856				
B		REVISED PER TDRR 27913				
C		REVISED PER TDRR 28178				
D		REVISED PER TDRR 29705				
E		REVISED PER TDRR 32580				
F		REVISED PER TDRR 33340				
G		REVISED PER TDRR 34492				



NOTES

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MOUNTING TORQUE FOR FIND NO. 24 TO BE 2.5 TO 3.0 FT-LBS
3. IDENTIFY WITH PART NO. PER ND1002019
4. ENCAPSULATE INDICATED AREAS PER ND1002236
5. SOLDER PER ND 1002071 USING SOLDER PER ND1002075
6. WELD PER ND1002005
7. AR DENOTES AS REQUIRED
8. BOND FIND NO. 32,33,38, 40 & 41 TO FIND NO. 39 PER ND1002009, METHOD C
9. DRESS AND TRIM AT ASSEMBLY USING FIND NO. 34
10. SEAL FIND NO.37 TO FIND NO.1 PER ND1002004 TYPE VI
11. APPLY FIND NO.36 TO INDICATED SURFACES OF FIND NO. 2. DO NOT APPLY TO BONDED RUBBER
12. MARK .07/.10 HIGH BLACK CHARACTERS PER ND1002019 AND ND1002122 TYPE II CLASS 2, USING MARKING INK 1006271-11
13. MOUNTING TORQUE FOR FIND NO.37 TO BE 15–20 INCH OUNCES
14. SEAL INSULATORS ON FIND NO. 4 PER ND1002187 TYPE III
15. MOUNTING TORQUE FOR FIND NO.30 TO BE 3.5–4.5 INCH POUNDS
16. MOUNTING TORQUE FOR FIND NO. 28 AND FIND NO. 29 TO BE 8 TO 9 INCH POUNDS
17. ENCAPSULATE INDICATED AREA PER ND1002295, EXCEPT CURE AT 155±5°F FOR 2 HOURS MINIMUM
18. BOND FIND NO. 39 TO FIND NO.1 PER ND1002004, TYPE IV
19. BOND FIND NO. 33, 38 AND 40 TO FIND NO.1 PER ND1002009, METHOD C
20. THIS ASSEMBLY NOT TO EXCEED 160°F IN MANUFACTURING PROCESS

QTY REQD -031	QTY REQD -021	QTY REQD -011	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO
1	—	—	2003894-211	SWITCH ASSEMBLY, PUSHBUTTON	80
1	—	—	-191		79
1	—	—	-181		78
1	—	—	-171		77
1	—	—	-161		76
1	—	—	-151		75
1	—	—	-141		74
1	—	—	-131		73
1	—	—	-121		72
1	—	—	-111		71
1	—	—	-091		70
1	—	—	-081		69
1	—	—	-071		68
1	—	—	-061		67
1	—	—	-051		66
1	—	—	-041		65
1	—	—	-031		64
1	—	—	-021		63
1	—	—	2003894-011	SWITCH ASSEMBLY, PUSHBUTTON	62
—	1	—	2003864-011	ADAPTER PLATE ASSEMBLY	61
—	1	—	2003875-211	SWITCH ASSEMBLY, PUSHBUTTON	60
—	1	—	-191		59
—	1	—	-181		58
—	1	—	-171		57
—	1	—	-161		56
—	1	—	-151		55
—	1	—	-141		54
—	1	—	-131		53
—	1	—	-121		52
—	1	—	-111		51
—	1	—	-091		50
—	1	—	-081		49
—	1	—	-071		48
—	1	—	-061		47
—	1	—	-051		46
—	1	—	-041		45
—	1	—	-031		44
—	1	—	-021		43
—	1	—	2003875-011	SWITCH ASSEMBLY, PUSHBUTTON	42
			2005953	INTERCONNECTING DIAGRAM	REF
AR	AR	AR	1010807-22	WIRE INSULATED	41
AR	AR	AR	1010416-14	WIRE, INSULATED	40
1	1	1	2004898	SUPPORT, WIRE	39
AR	AR	AR	1010416-13	WIRE, INSULATED	38
1	1	1	2004039	TERMINAL, THREADED	37
AR	AR	AR	1006879	SILICONE COMPOUND	36
AR	AR	AR	1010416-15	WIRE, INSULATED	35
AR	AR	AR	1012507-003	TAPE, LACING	34
AR	AR	AR	1010416-20	WIRE, INSULATED	33
AR	AR	AR	1010848-1	WIRE, INSULATED	32
4	4	4	NAS620-6L	WASHER, FLAT	31
13	13	13	MS51959-20	SCREW, FLAT HD, CROSS RECESSED	30
4	4	4	MS51957-30	SCREW, PAN HD, CROSS RECESSED	29
2	2	2	MS51959-28	SCREW, FLAT HD, CROSS RECESSED	28
19	19	19	1010635-003	WASHER, LOCK	27
19	19	19	2004940-001	WASHER, PLAIN	26
19	19	19	1000159-18	O RING SEAL	25
19	19	19	2004942	NUT, HEX	24
—	—	1	2003984-211	SWITCH ASSEMBLY, PUSHBUTTON	23
—	—	1	-191		22
—	—	1	-181		21
—	—	1	-171		20
—	—	1	-161		[illegible]
—	—	1	-151		[illegible]
—	—	1	-141		17
—	—	1	-131		16
—	—	1	-121		15
—	—	1	-111		14
—	—	1	-091		13
—	—	1	-081		12
—	—	1	-071		11
—	—	1	-061		[illegible]
—	—	1	-051		9
—	—	1	-041		8
—	—	1	-031		[illegible]
—	—	1	-021		6
—	—	1	2003984-011	SWITCH ASSEMBLY, PUSHBUTTON	5
1	1	1	2003948-011	CONNECTOR, PLATE ASSEMBLY	[illegible]
1	—	1	2003959-011	ADAPTER, PLATE ASSEMBLY	3
2	2	2	1006351	GASKET, PREFORMED	2
1		1	2004968-021	HOUSING, FRONT	[illegible]

LIST OF MATERIALS

NEXT ASSY	USED ON
2003994	
2003950	

APPLICATION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
CAPACITOR VALUES ARE IN μf
RESISTOR VALUES ARE IN OHMS
TOLERANCES ON FRACTIONS ± DECIMALS ±.01 ANGLES ±
DO NOT SCALE THIS DRAWING

MATERIAL

MIT INSTRUMENTATION LAB CAMBRIDGE MASS

DRAWN J. P. Leonard
CHECKED J. C. Jenkins
APPROVED
APPROVED
APPROVED MIT
APPROVED MSC A. G. METZGER

MANNED SPACECRAFT CENTER HOUSTON TEXAS

FRONT HOUSING ASSEMBLY

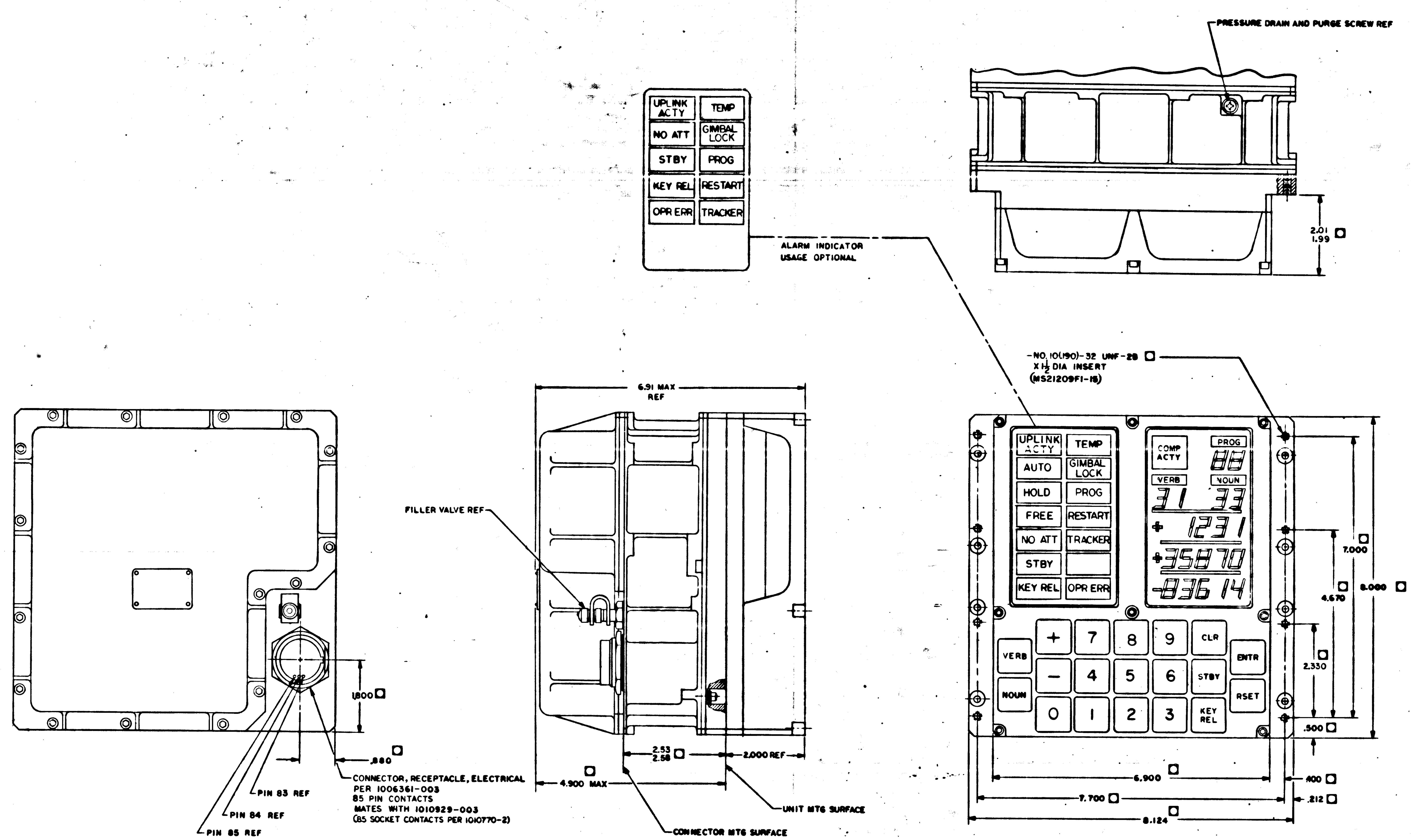
AGC DSKY

CODE IDENT NO 80230 | SIZE J | DRAWING NO. 2003949

SCALE 1/1 | SHEET 1 OF 3

2003956 A

SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TORR 26204 DR [signature] CHK [signature]		



NOTES
1. ☐ DIMENSIONS CONTROLLED BY ICD MH01-01305-116
2. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
3. WEIGHT *Later*
4. ⊕ INDICATES CENTER OF GRAVITY *Locate later*

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO

LIST OF MATERIALS

NEXT ASSY	USED ON

APPLICATION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS DECIMALS ANGLES ±.005
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH

MIT INSTRUMENTATION LAB
CAMBRIDGE, MASS

DRAWN [signature] DATE
CHECKED [signature]
APPROVAL [signature]
APPROVAL [signature]
NASA APPROVAL [signature]
MIT APPROVAL [signature]

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

AGC DSKY OUTLINE DRAWING

CODE IDENT NO. 80230 | SIZE J | NASA DRAWING NO. 2003956
SCALE 1/1 | WT | SHEET 1 OF 1

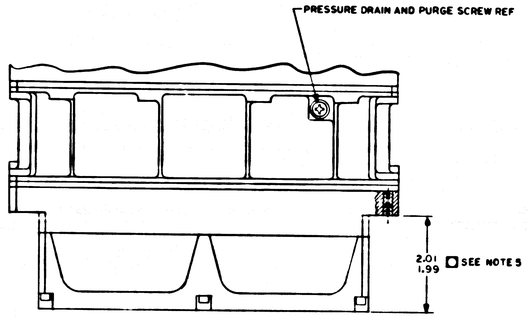
2003956 A

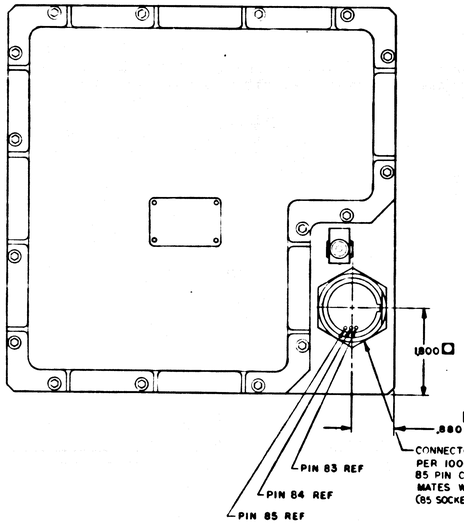
2003956 A

2003956R

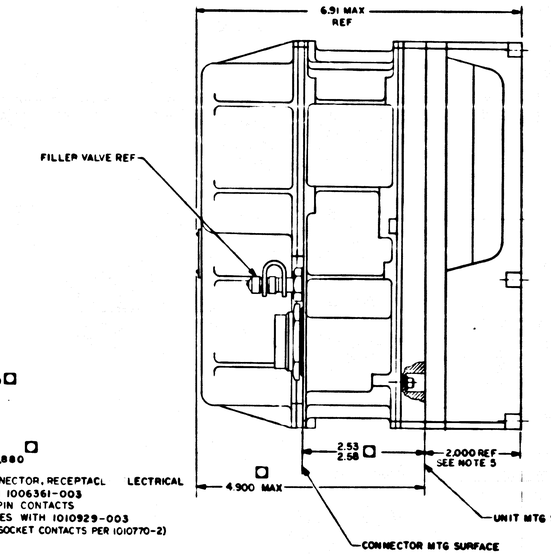
REVISIONS			
SYM	DESCRIPTION	DATE	APPROVED
A	REVISED PER TDRR 26.04 DR [illegible] CHK [illegible]	[illegible]	[illegible]
B	REVISED PER TDRR 35066 DR [illegible] CHK [illegible]	[illegible]	[illegible]

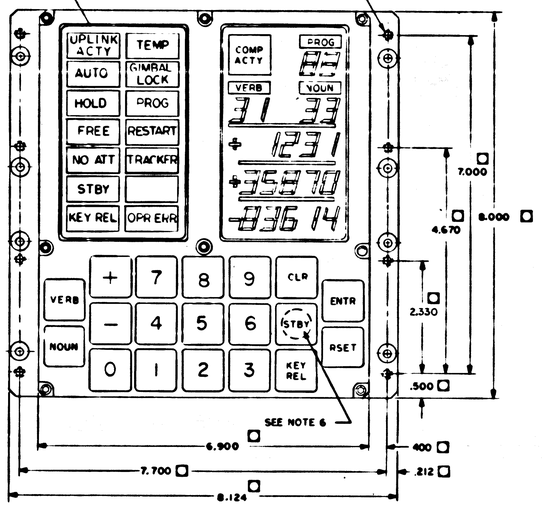
ALARM INDICATOR USAGE OPTIONAL





CONNECTOR, RECEPTACL LECTRICAL PER 1006361-003
85 PIN CONTACTS
MATES WITH 1010929-003
(85 SOCKET CONTACTS PER 1010770-2)





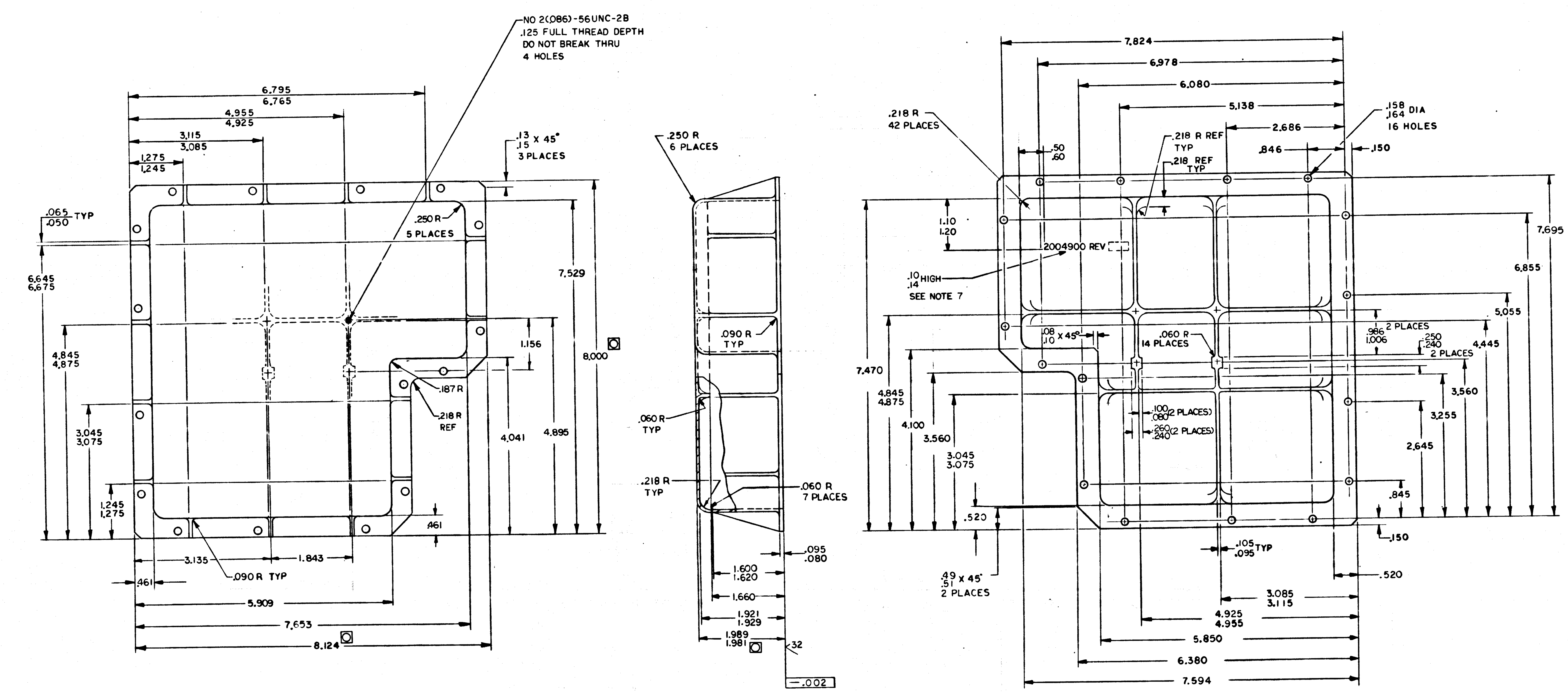
NOTES
1. ☐ DIMENSIONS CONTROLLED BY ICD MH01-01305-116
2. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
3. WEIGHT [illegible]
4. ⊕ INDICATES CENTER OF GRAVITY [illegible]
5. THE 2.00/1.99 DIMENSION APPLIES TO ALL CONFIGURATION UNIVERSAL DSKYS WITH THE EXCEPTION OF THE 2003985-061, 2003950-031, 2003994-021 & SUBSEQUENT CONFIGURATIONS IN WHICH THE SURFACE OF THE I/L & COVER ASSY 2003899-011 SHALL PROTRUDE BEYOND THE MAXIMUM SHOWN UP TO A MAXIMUM OF .09
6. THE 2003985-061, 2003950-031, 2003994-021 & SUBSEQUENT CONFIGURATIONS SHALL REFLECT "PRO" IN KEY POSITION INDICATED.

QTY PER	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO
		LIST OF MATERIALS	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES ±.005 DO NOT SCALE THIS DRAWING	INSTRUMENTATION LAB MANNED SPACECRAFT CENTER HOUSTON TEXAS
MATERIAL	DRAWN [illegible]
HEAT TREATMENT	CHECKED [illegible]
FINISH	APPROVAL [illegible]
NEXT ASSY USED ON	APPROVAL [illegible]
APPLICATION	NASA APPROVAL [illegible]
	QUALITY APPROVAL [illegible]
	AGC DSKY OUTLINE DRAWING
	CODE IDENT NO 80230 SIZE J NASA DRAWING NO 2003956
	SCALE 1/1 WT SHEET OF 1

2003956 B

2003956 B



NOTES
1. MATL: 7075-T6 AL PER QQ-A-250/12, TEMP T6
2. REMOVE BURRS AND SHARP EDGES .005/.020
3. SURFACE FINISH 125 EXCEPT WHERE OTHERWISE SHOWN
4. CHROMATE PER MIL-C-5541, TYPE II, GRADE C, CLASS 3
5. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
6. ☐ DIMENSIONS CONTROLLED BY ICD MH01
7. MARK AS SHOWN BLACK CHARACTERS PER ND1002019 AND ND1002122, TYPE II, CLASS 2 USING INK IC06271-10

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.

LIST OF MATERIALS

NEXT ASSY	USED ON
2003900	
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± DECIMALS ±.005 ANGLES ±1°
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 1
HEAT TREATMENT NONE
FINAL FINISH SEE NOTE 4

MIT INSTRUMENTATION LAB, CAMBRIDGE MASS.
DRAWN / CHECKED / APPROVAL / APPROVAL
NASA APPROVAL
MIT APPROVAL

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

CCVER, REAR
AGC DSKY

CODE IDENT NO 80230 | SIZE E | NASA DRAWING NO 2004900
SCALE 1/1 | SHEET 1 OF 1

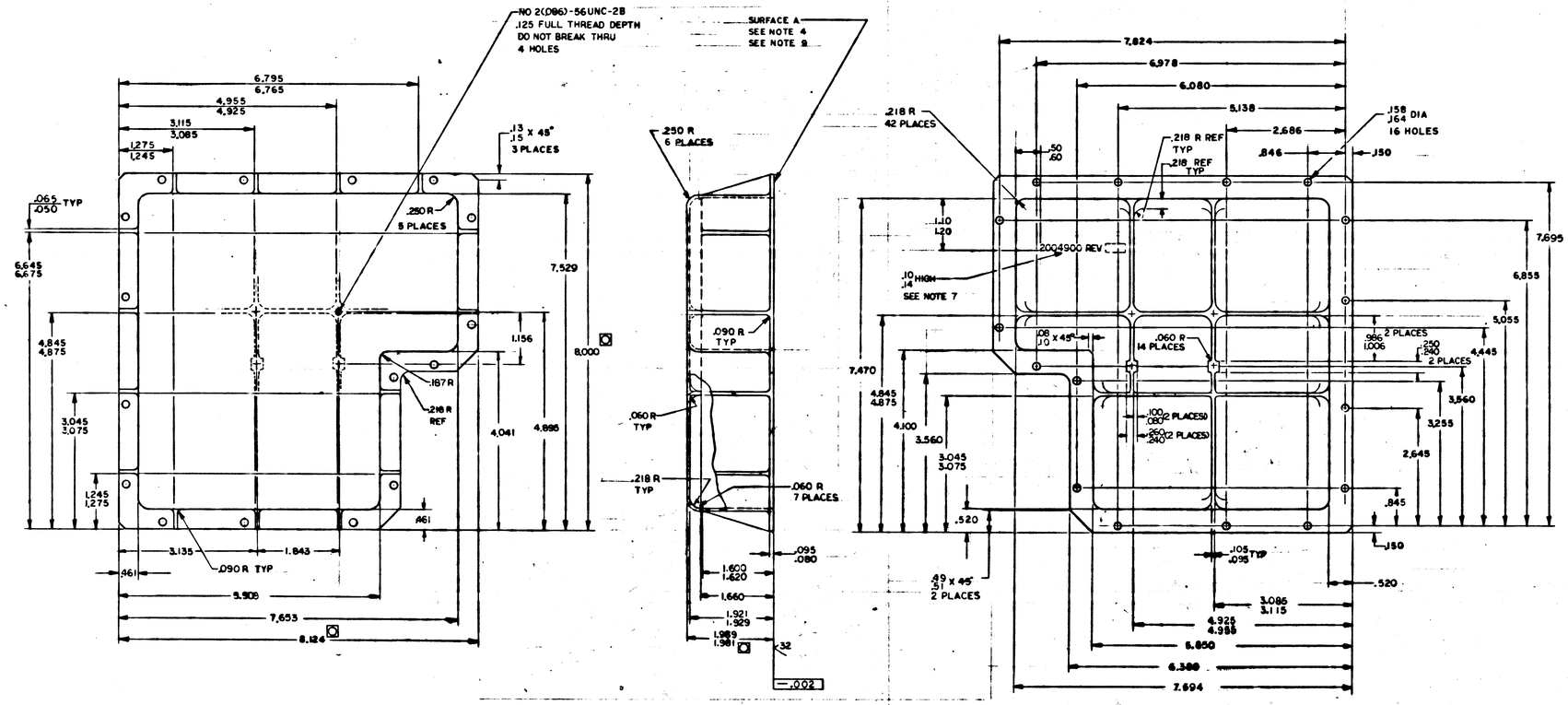
2004900 —

REVISIONS: SYM | DESCRIPTION | DATE | APPROVAL

MASTER

2004900 A

REVISIONS 22781			
ZONE	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDAR 22781 DR CHK APPD	7/1/68	



NOTES

1. MATL: 7075-T6 AL PER QQ-A-250/12, TEMP T6
2. REMOVE BURRS AND SHARP EDGES .005/.020
3. SURFACE FINISH 63 EXCEPT WHERE OTHERWISE SHOWN
4. CHROMATE SURFACE A PER MIL-C-5541, TYPE II, GRADE C, CLASS 3
5. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
6. ⊡ DIMENSIONS CONTROLLED BY ICD MH01-01305-116
7. MARK AS SHOWN WHITE CHARACTERS PER ND1002019 AND ND1002122, TYPE II, CLASS 2 USING INK 1006271-11
8. ANODIZE PER MIL-A-8625 TYPE II, DYED BLACK EXCEPT SURFACE A AND HOLES
9. NO SCRATCHES PERMISSABLE ON SURFACE A
10. IDENTIFY WITH PART NO. PER ND1002019

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	
2003985			
2003900			
NEXT ASSY	USED ON		
APPLICATION			

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± DECIMALS ±.005 ANGLES ± 1°
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 1
HEAT TREATMENT NONE
FINISH SEE NOTE 4

M I T INSTRUMENTATION LAB Cambridge, Mass.
DES. NO. ASSIGNED

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

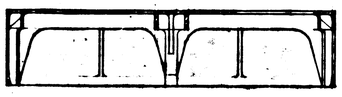
DRAWN W. Hubbard DATE
CHECKED Roger Schmidt
APPROVAL [illegible]
APPROVAL [illegible]
NASA APPROVAL [illegible]
QUAL APPROVAL [illegible]
MIT APPROVAL

COVER, REAR
AGC DSKY

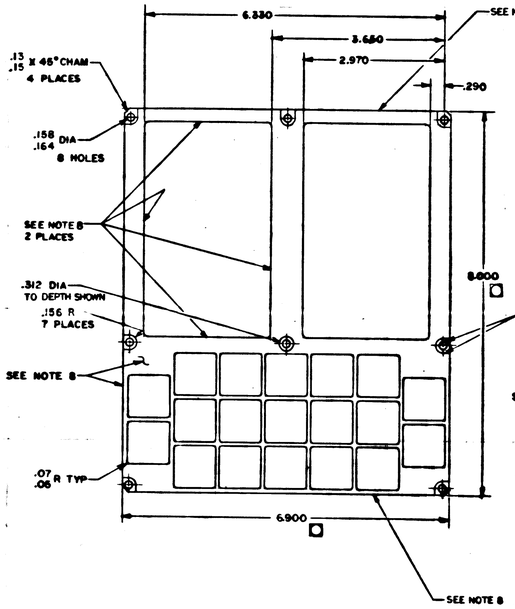
CODE IDENT NO. 80230 | SIZE E | NASA DRAWING NO. 2004900
SCALE 1/1 | WT | SHEET 1 OF 2

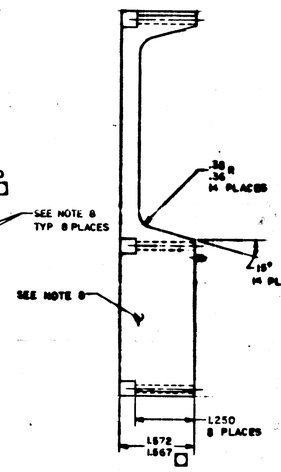
A	REVISED PER TDRR 22313		

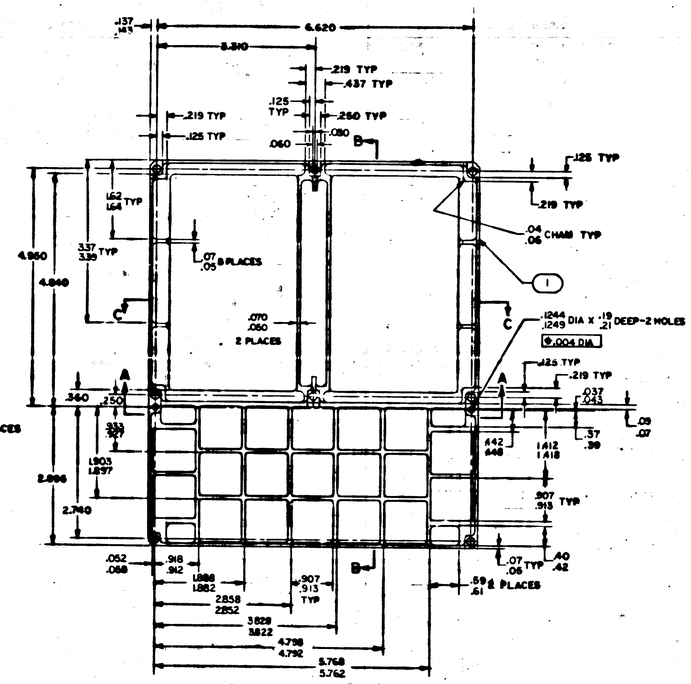
2004929 A

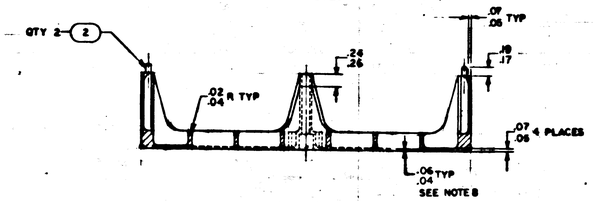


SECTION C-C

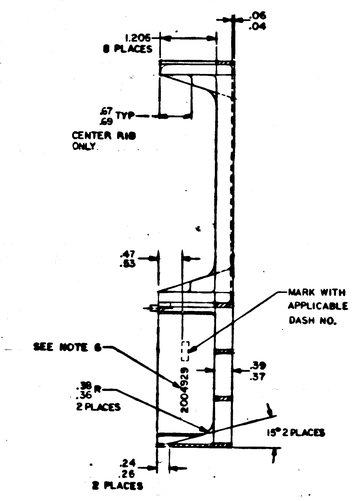








SECTION A-A



SECTION B-B

NOTES
1. MATL:6061-T6-AL PER QQ-A-250/11,TEMP 6
2. REMOVE BURRS AND SHARP EDGES.005/.015
3. ALL SURFACES 125
4. CHROMATE PER MIL-C-5541,TYPE II,GRADE C,CLASS B
5. UNLESS OTHERWISE SPECIFIED ALL FILLETS AND RADII TO BE .05 R MAX
6. MARK .10/.14 HIGH BLACK CHARACTERS PER NDI002019 AND NDI002122,TYPE II,CLASS 2 USING INK 1006271-10
7. [C] DIMENSIONS CONTROLLED BY ICD MH01
8. PAINT INDICATED SURFACES WITH 1010729-1 RED GRAY EPOXY ENAMEL PER NDI002110
9. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
2	MS16555-625	PIN, DOWEL	2
1	2004928-001	COVER, FRONT	1
AR		LIST OF MATERIALS	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	MIT INSTRUMENTATION LAB Cambridge, Mass.
TOLERANCES ON FRACTIONS DECIMALS ANGLES ± .005 ± 2°	MANNED SPACECRAFT CENTER HOUSTON, TEXAS
DO NOT SCALE THIS DRAWING	DRAWN W.D. Bennett DATE 4/29/68
MATERIAL SEE NOTE 1	CHECKED Roger Hamblet
HEAT TREATMENT NONE	APPROVAL
FINISH SEE NOTES 4 & 8	APPROVAL
2003900 NEXT ASSY	USED ON APPLICATION	MSA APPROVAL W.D. Bennett
	MIT APPROVAL

COVER, FRONT
AGC DSKY

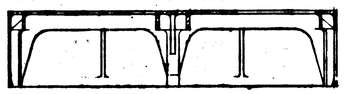
CODE IDENT NO.	SIZE	MSA Drawing No.
80230	J	2004929

SCALE 1/1 SHEET 1 OF 1

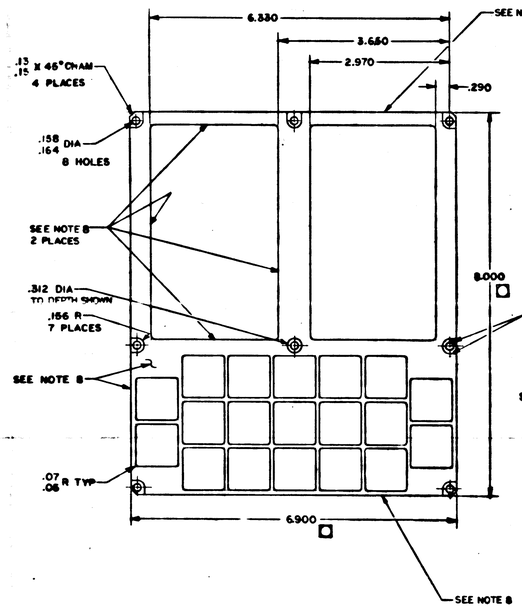
MASTER

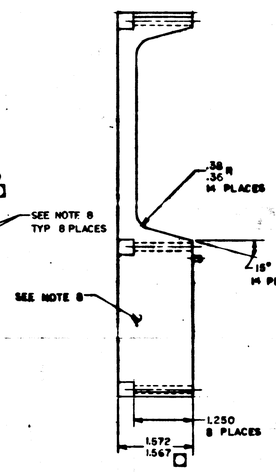
2004929 B

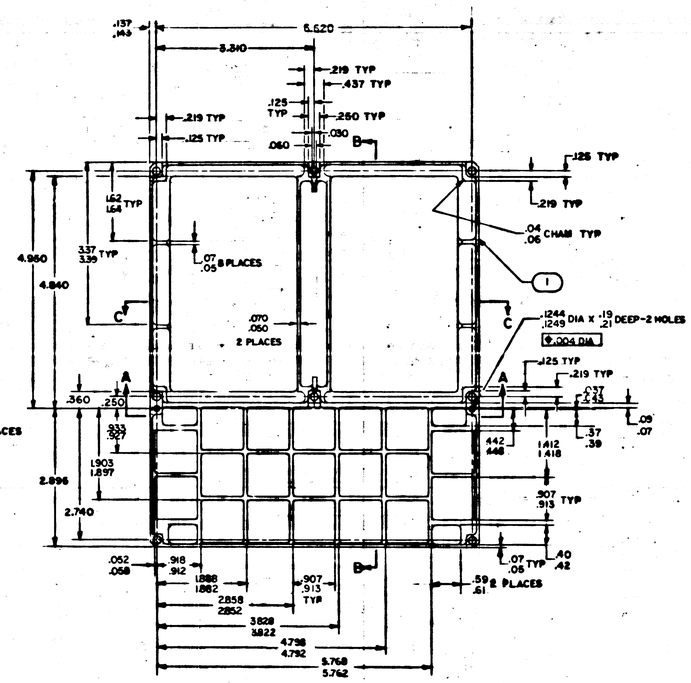
REVISIONS			
ZONE	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 22313 DR [illegible] CHK [illegible] APPD [illegible]	[illegible]	[illegible]
B	REVISED PER TDRR 22547 DR [illegible] CHK [illegible] APPD [illegible]	[illegible]	[illegible]

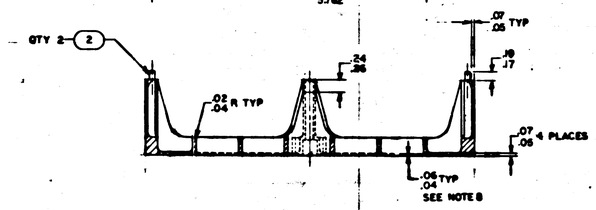


SECTION C-C

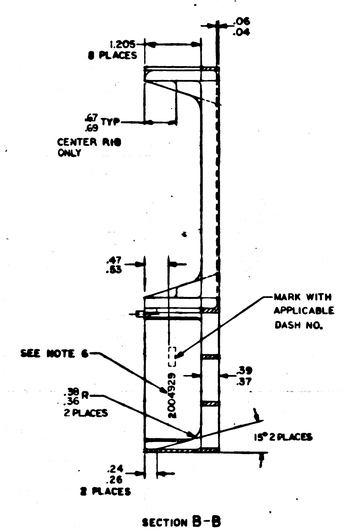








SECTION A-A



SECTION B-B

NOTES:
1. MATL: 6061-T6-AL PER QQ-A-250/11, TEMPER
2. REMOVE BURRS AND SHARP EDGES .005/.015
3. ALL SURFACES 125
4. CHROMATE PER MIL-C-5541, TYPE II, GRADE C, CLASS B
5. UNLESS OTHERWISE SPECIFIED ALL FILLETS AND RADII TO BE .09 R MAX
6. MARKING .14 HIGH BLACK CHARACTERS PER NDI0020I9 AND NDI0020I22, TYPE II, CLASS 2 USING INK 1006271-10
7. DIMENSIONS CONTROLLED BY ICD MH01
8. PAINT INDICATED SURFACES WITH 1008809-1 RED GRAY EPOXY ENAMEL PER 1002279
9. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
2	MS16555-628	PIN, DOWEL	2
1	2004929-001	COVER, FRONT	1
011		LIST OF MATERIALS	

2003905	
2003900	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS .XX ±.01 .XXX ±.005 ANGLES ±2°
DO NOT SCALE THIS DRAWING
MATERIAL: SEE NOTE 1
HEAT TREATMENT: NONE
FINISH: SEE NOTES 4 & 8

INSTRUMENTATION LAB
DRAWN [illegible] DATE 11/6/67
CHECKED [illegible]
APPROVED [illegible]
APPROVED [illegible]
NASA APPROVAL [illegible]
INST APPROVAL [illegible]

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

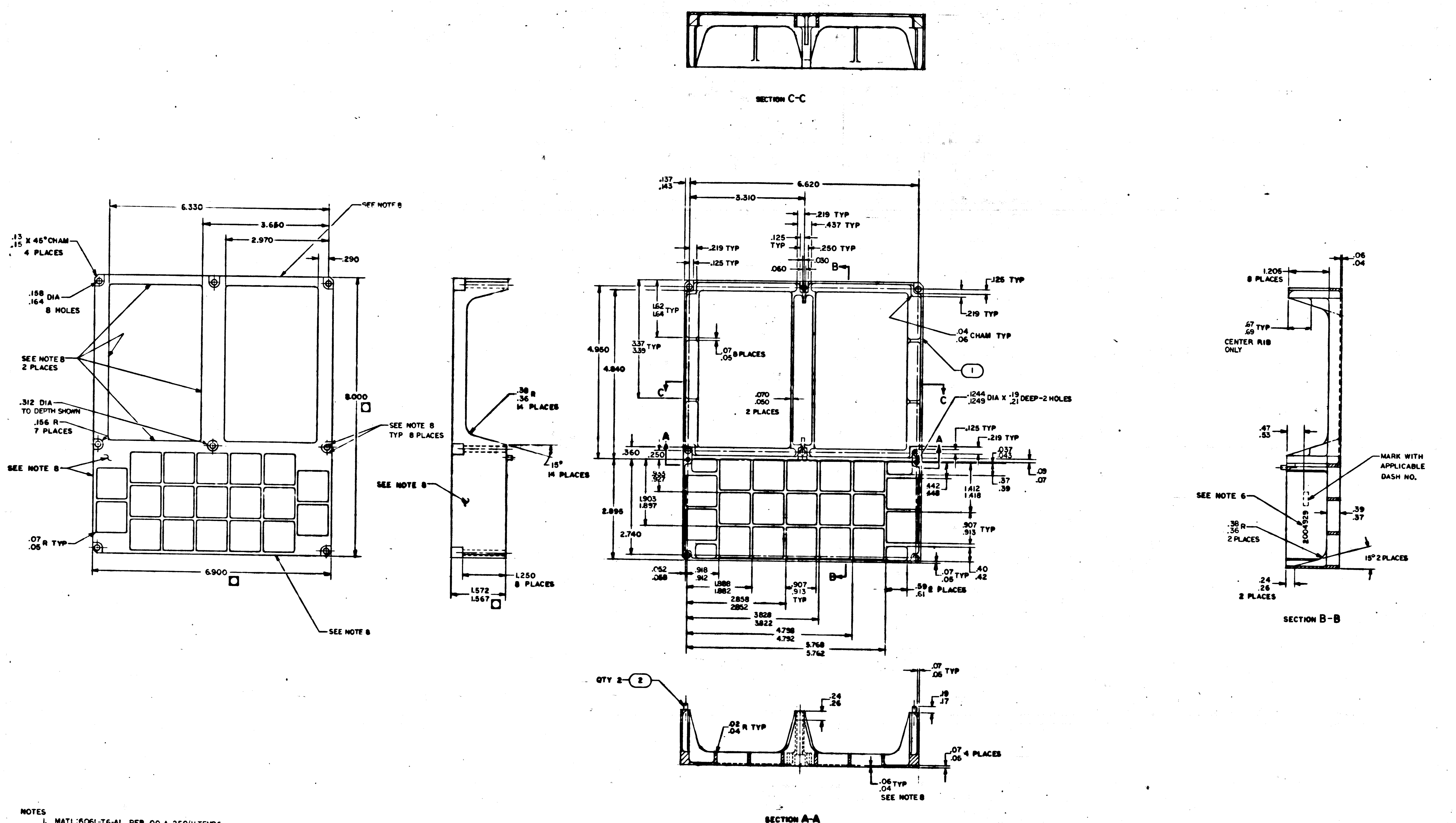
COVER, FRONT
AGC DSKY

CODE IDENT NO. 60230 | SIZE J | NASA DRAWING NO. 2004929
SCALE 1/1 | WT | SHEET 1 OF 1

MASTER

2004929 B

SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 22313 DR CHK APPD		
B	REVISED PER TDRR 22547 DR CHK APPD		
C	REVISED PER TDRR 22738 DR CHK APPD		



NOTES

1. MATL:6061-T6-AL PER QQ-A-250/11,TEMP6
2. REMOVE BURRS AND SHARP EDGES.005/.015
3. ALL SURFACES 125/
4. CHROMATE PER MIL-C-5541,TYPE II,GRADE C,CLASS B
5. UNLESS OTHERWISE SPECIFIED ALL FILLETS AND RADII TO BE .09 R MAX
6. MARK .10/.14 HIGH BLACK CHARACTERS PER ND1002019 AND ND1002122,TYPE II,CLASS 2 USING INK 1006271-10
7. DIMENSIONS CONTROLLED BY ICD MH01-01305-116
8. PAINT INDICATED SURFACES WITH 1008809-1 MED GRAY EPOXY ENAMEL PER 1002279
9. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327

MASTER

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
2	MS16555-625	PIN, DOWEL	2
1	2004929-001	COVER, FRONT	1
011	LIST OF MATERIALS		

NEXT ASSY	USED ON
2003986	
2003900	
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± DECIMALS ±.005 ANGLES ±2°

DO NOT SCALE THIS DRAWING

MATERIAL: SEE NOTE 1

HEAT TREATMENT: NONE

FINAL FINISH: SEE NOTES 4 & 8

MIT INSTRUMENTATION LAB

DRAWN / DATE / CHECKED / APPROVAL / APPROVAL / NASA APPROVAL / MIT APPROVAL / MIT APPROVAL

MANNED SPACECRAFT CENTER HOUSTON TEXAS

COVER, FRONT
AGC DSKY

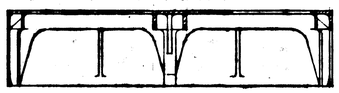
CODE IDENT NO. 80230 | SIZE J | NASA DRAWING NO. 2004929

SCALE 1/1 | WT | SHEET 1 OF 1

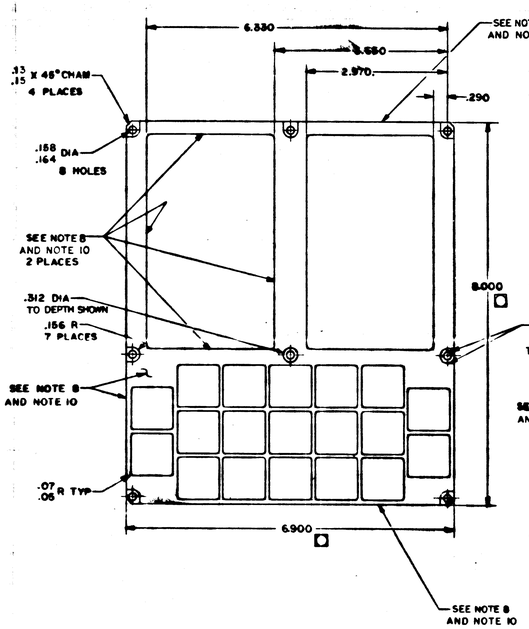
2004929 C

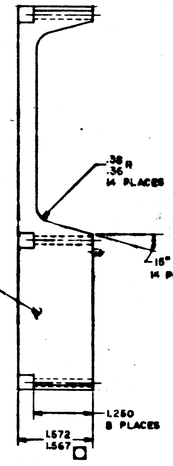
2004929 D

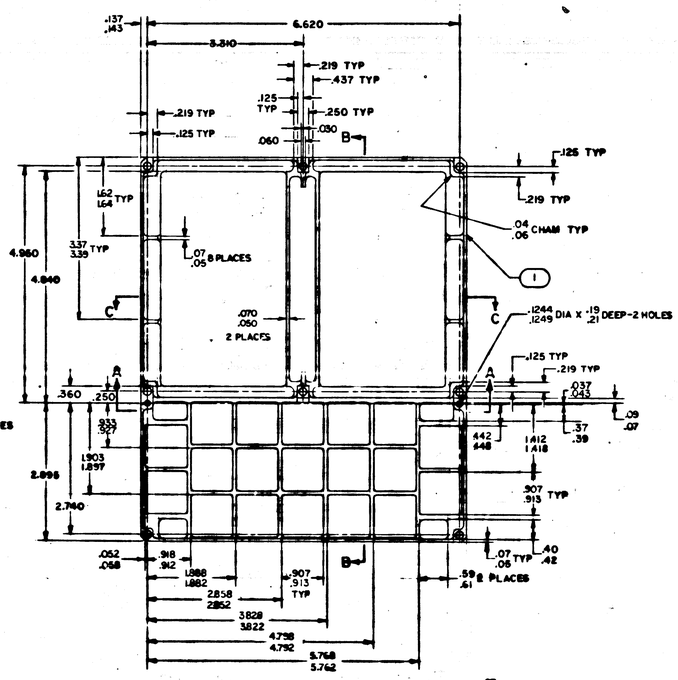
REVISIONS			
ZONE		DESCRIPTION	DATE / APPROVAL
(11)	A	REVISED PER TDRR 22313 DR [illegible] CHK [illegible] APPD [illegible]	[illegible]
(12)	B	REVISED PER TDRR 22547 DR [illegible] CHK [illegible] APPD [illegible]	[illegible]
(13)	C	REVISED PER TDRR 22738 DR [illegible] CHK [illegible] APPD [illegible]	[illegible]
(14)	D	REVISED PER TDRR 28178 DR [illegible] CHK [illegible] APPD [illegible]	[illegible]

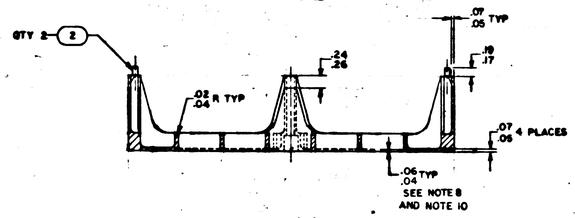


SECTION C-C

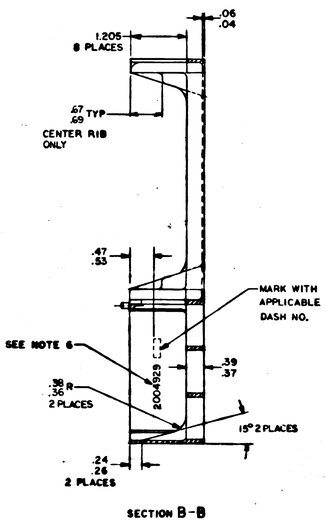








SECTION A-A



SECTION B-B

-021	1 THRU 10
-011	1 THRU 9
DASH NO.	APPLICABLE NOTES
NOTE APPLICATION	

NOTES:
1. MATL: 6061-T6-4L PER QQ-A-250/11, TEMPER
2. REMOVE BURRS AND SHARP EDGES .005/.015
3. ALL SURFACES 125
4. CHROMATE PER MIL-C-5541, TYPE II, SPADE C, CLASS B
5. UNLESS OTHERWISE SPECIFIED ALL FILLETS AND RADII TO BE .09 R MAX
6. MARK .1/.14 HIGH BLACK CHARACTERS PER ND1002019 AND ND1002122, TYPE II, CLASS 2 USING INK 1006271-10
7. DIMENSIONS CONTROLLED BY MCD MMON- [illegible] 15-116
8. PAINT INDICATED SURFACES WITH 1008809-[illegible] GRAY EPOXY ENAMEL PER 1002279
9. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
- C. FINISH INDICATED SURFACES PER ND1002277 SAE AMS 3343-003

QTY REQD	QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
2	2	MS16555-625	PIN, DOWEL	2
1	1	2004929-001	COVER, FRONT	1
021	011	LIST OF MATERIALS		

2003990	
2003986	
2003900	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES FOR: FRACTIONS ±, DECIMALS .005, ANGLES ±2°. DO NOT SCALE THIS DRAWING.
MATERIAL: SEE NOTE 1
FINISH: SEE NOTES 4 & 8
HEAT TREATMENT: NONE

MIT INSTRUMENTATION LAB, CAMBRIDGE, MASS.
DRAWN [illegible] DATE [illegible]
CHECKED [illegible]
APPROVAL [illegible]
APPROVAL [illegible]
NASA APPROVAL [illegible]
MIT APPROVAL [illegible]

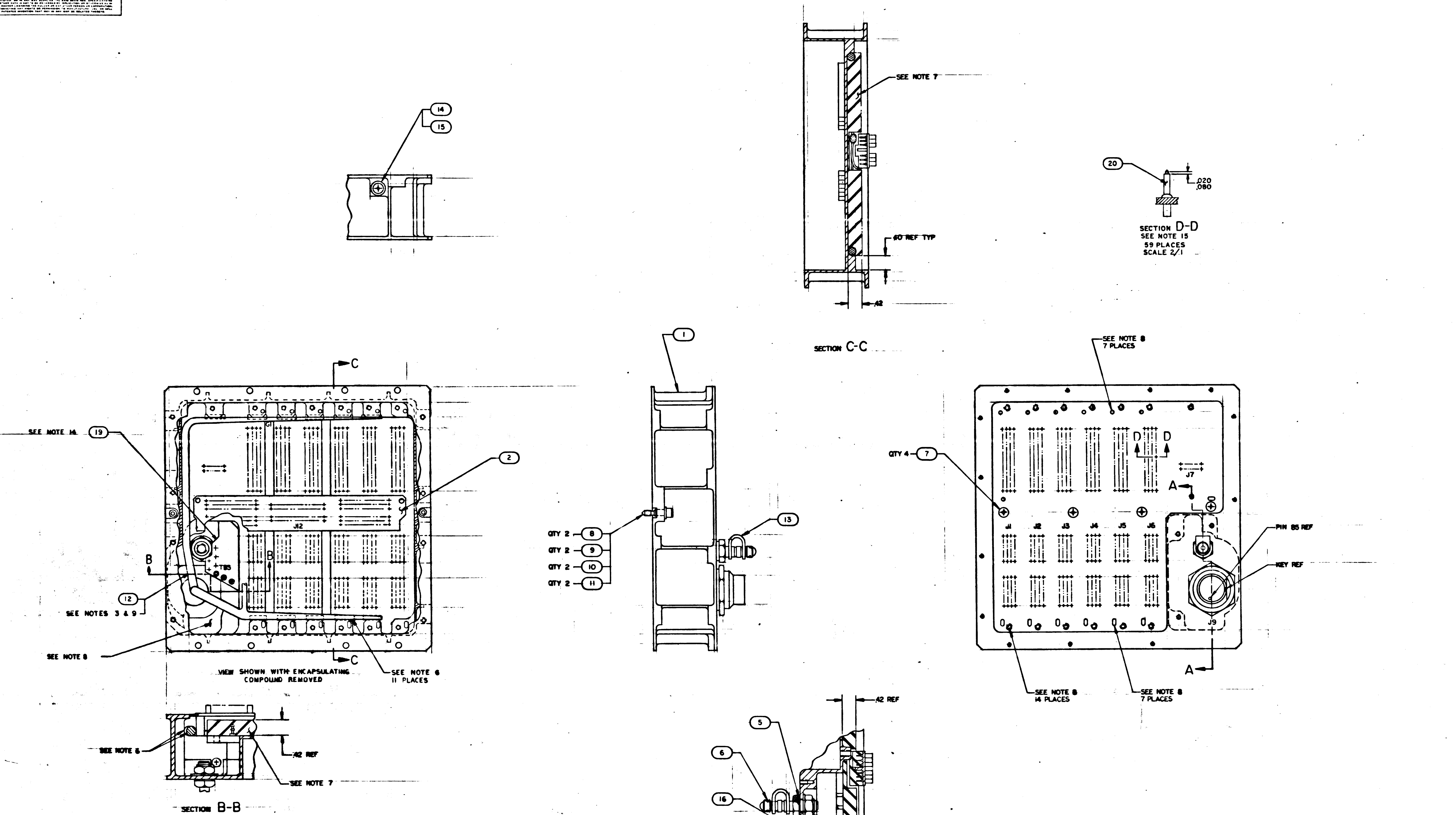
MANNED SPACECRAFT CENTER, HOUSTON, TEXAS

COVER, FRONT
AGC DSKY

CODE IDENT NO. 80230 | SIZE J | NASA DRAWING NO. 2004929
SCALE 1/1 | WT | SHEET 1 OF 1

MASTER

2004929 D



NOTES

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. IDENTIFY WITH PART NO. PER ND1002019
3. SOLDER LEADS OF FIND NO. 12 PER ND1002071 USING SOLDER PER ND1002079
4. MOUNTING TORQUE FOR FIND NO. 3 TO BE 10 TO 11 FT-LBS
5. AR DENOTES AS REQUIRED
6. BOND FIND NO. 12 TO FIND NO. 1 PER ND1002004, TYPE V IN AREAS INDICATED
7. ENCAPSULATE INDICATED AREAS PER ND1002295
8. INDICATED AREA AND HOLES TO BE FREE FROM ENCAPSULATING COMPOUND
9. MOUNTING TORQUE FOR CONNECTOR OF FIND NO. 12 TO BE 20 TO 25 FT LBS
10. WIRE USING LEAD ELECTRICAL & PER ND1002031 EXCEPT 1010807-22 TO HAVE 5 MIN TO 6 MAX TURNS OF UNINSULATED WIRE, 1/2 TO 1-1/2 TURNS OF INSULATED WIRE, STRIP LENGTH OF .100 TO .118, AND STRIP FORCE OF 5 LBS MIN.
11. INDICATED AREAS TO BE FREE OF WIRES AND ENCAPSULATING COMPOUND TO THE LEVEL OF SURFACE A
12. DISCARD VENDOR SUPPLIED O RING AND REPLACE WITH FIND NO. 18
13. WELD PER ND1002005
14. BOND FIND NO. 19 TO FIND NO. 1 PER ND1002004 TYPE V
15. SLEEVE ALL UNUSED WRAPOSTS USING FIND NO. 20, EXCEPT PINS NO. 93 THRU 124 OF J1 THRU J6.
16. REF. DWG NO. 1006732
17. REF. DWG NO. 1010807-22

	2005954
A	1006776-21
1	2003880-011
1	1000159-10
1	1004546-6
1	1010635-004
1	NAS1598D08N
1	MS51957-42
1	2004931
1	2003886-011
2	MS16633-4015
2	1004546-3
2	1004546-1
2	1004579-2
4	MS51959-28
1	2004903
1	1000159-14
1	MS15795-814
1	MS20364D624A
1	2003882-011
1	203947-011
	PART OR IDENTIFYING
-01	

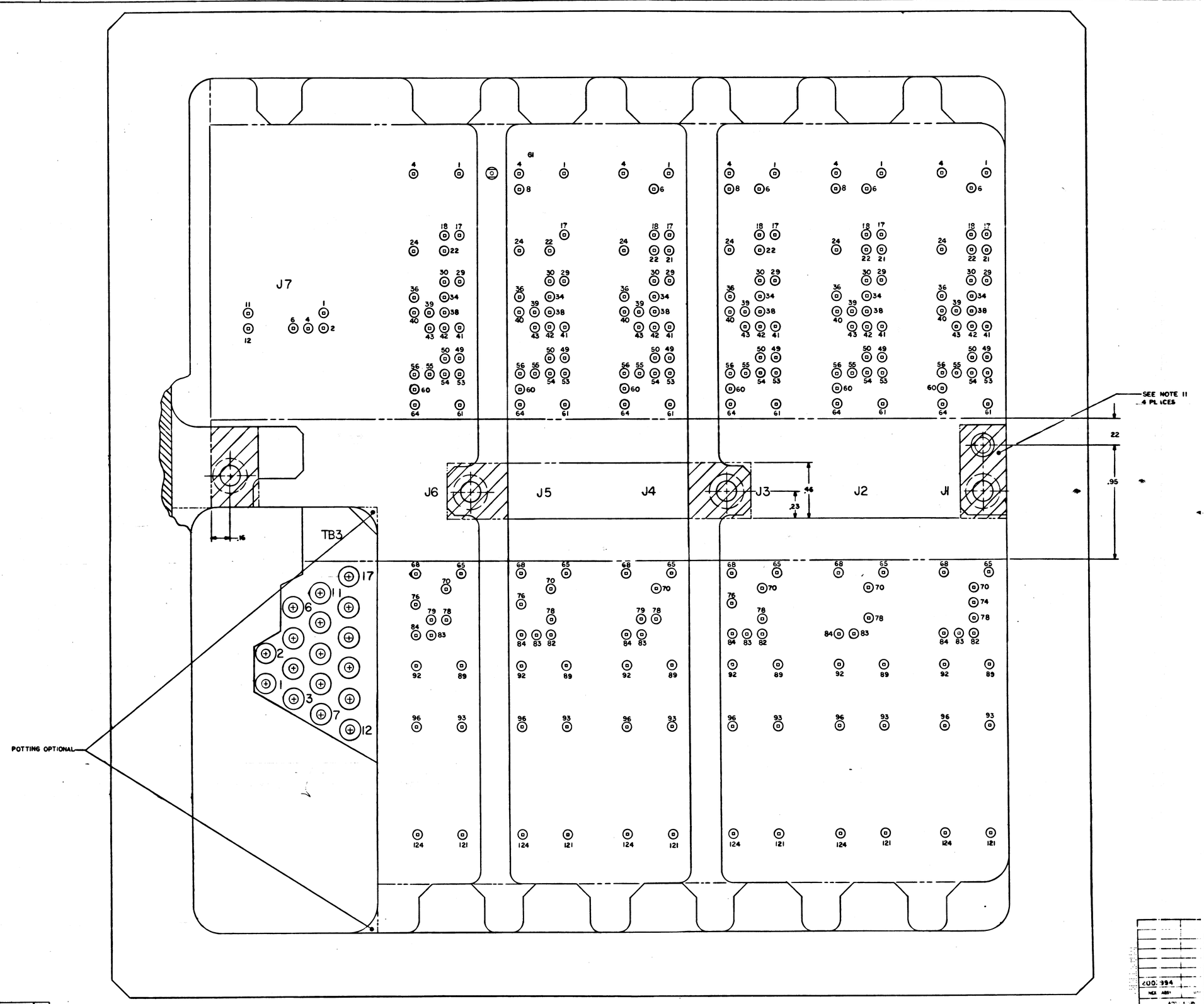
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS DECIMALS ANGLES
± ±.01 ±
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH

MIT INSTRUMENTATION LABORATORY CAMBRIDGE MASS

DRAWN
CHECKED
APPROVAL
APPROVAL
NASA APPROVAL
APPROVAL

2003994	
NEXT ASSY	USED ON
APPLICATION	

2003885 A



2003885 A

2003885 A

REV	DESCRIPTION
A	INITIAL RELEASE

LEAD ELECTRICAL

COND IDENT	REMARKS	FROM	SEE NOTE	COLOR	SIZE AWG	LENGTH	TO	REMARKS
A1		J12-166	16	OPT	30	AR	J7-6	
A2		-167	16	OPT	30		J6-43	
A3		-160	17	WHT	26		-18	
A4		-159	16	OPT	30		-34	
A5		-154					-40	
A6		-153					-50	
A7		-148	16	OPT	30		-39	
A8		-147	17	WHT	26		-38	
A9		-142	16	OPT	30		-54	
A10		-141					-41	
A11		-136					-29	
A12		-135					-55	
A13		-187					-42	
A14		-210	16	OPT	30		-49	
A15		-182	17	WHT	26		-60	
A16		-204	16	OPT	30		-56	
A17		-192					-17	
A18		-176					-36	
A19		-175					-22	
A20		-174					J6-30	
A21		-170					J7-4	
A22		-169					J6-24	
A23		-168					J6-53	
A24		-164					J5-43	
A25		-163					-34	
A26		-162					-36	
A27		-161					-22	
A28		-158					-56	
A29		-157					-39	
A30		-156	16	OPT	30		-24	
A31		-155	17	WHT	26		-8	
A32		-152	16	OPT	30		-42	
A33		-151					-40	
A34		-150	17	WHT	26		-38	
A35		-149	16	OPT	30		-30	
A36	SEE NOTE 10	-146					-50	SEE NOTE 10
A37		-145					-55	
A38		-144					-49	
A39		-143					-29	
A40		-140					-54	
A41		-139					-53	
A42		-138					-41	
A43		-137	16	OPT	30		-17	
A44		-134	17	WHT	26		J5-60	
A45		-133	16	OPT	30		J4-43	
A46		-132					J4-6	
A47		-131					J6-84	
A48		-130					J4-24	
A49		-129					J4-39	
A50		-128					J4-17	
A51		-127					J6-83	
A52		-126					J4-50	
A53		-125					J4-40	
A54		-124					J4-36	
A55		-123					J6-78	
A56		-122					J4-30	
A57		-121					J4-29	
A58		-120					J4-18	
A59		-119					J6-70	
A60		-118					J4-34	
A61		-117					J4-38	
A62		-116					J4-21	
A63		-115					J6-76	
A64		-114					J4-55	
A65		-113					-41	
A66		-112					-42	
A67		-111					-83	
A68		-110					-53	
A69		-109					-54	
A70		-108					-49	
A71		-107					-70	
A72		J12-106	16	OPT	30	AR	J4-60	

LEAD ELECTRICAL

COND IDENT	REMARKS	FROM	SEE NOTE	COLOR	SIZE AWG	LENGTH	TO	REMARKS
A73		J12-105	16	OPT	30	AR	J4-56	
A74		-104					J4-22	
A75		-103					J3-76	
A76		-102					-17	
A77		-101	16	OPT	30		-24	
A78		-100	17	WHT	26		-18	
A79		-99	16	OPT	30		-70	
A80		-98	16	OPT	30		-40	
A81		-97	16	OPT	30		-36	
A82		-96	17	WHT	26		J3-6	
A83		-95	16	OPT	30		J2-84	
A84		-94	16	OPT	30		J3-22	
A85		-93	16	OPT	30		J3-30	
A86		-92	17	WHT	26		J3-8	
A87		-91	16	OPT	30		J2-83	
A88		-90	16	OPT	30		J3-39	
A89		-89	16	OPT	30		J3-43	
A90		-88	17	WHT	26		J3-38	
A91		-87	16	OPT	30		J1-78	
A92		-86					J3-56	
A93		-85					J3-42	
A94		-84					J3-34	
A95		-83					J1-74	
A96		-82					J3-50	
A97		-81	16	OPT	30		J3-55	
A98		-80	17	WHT	26		J3-60	
A99		-79	16	OPT	30		J1-70	
A100		-78					J3-41	
A101		-77					J3-29	
A102		-76					J3-54	
A103		-75					J3-49	
A104		-74					J6-79	
A105		-73					J5-76	
A106		-72					J3-53	
A107		-71	16	OPT	30		J2-60	
A108	SEE NOTE 10	-70	17	WHT	26		J2-8	SEE NOTE 10
A109		-69	16	OPT	30		J2-18	
A110		-68					J5-70	
A111		-67					J5-84	
A112		-66					J2-56	
A113		-65					J2-24	
A114		-64	16	OPT	30		J2-36	
A115		-63	17	WHT	26		J2-6	
A116		-62	16	OPT	30		J5-83	
A117		-61					J5-78	
A118		-60					J2-21	
A119		-59					J2-30	
A120		-58					J2-40	
A121		-57					J2-34	
A122		-56					J5-82	
A123		-55					J4-79	
A124		-54					J2-50	
A125		-53					J2-39	
A126		-52					J2-43	
A127		-51					J2-22	
A128		-50					J4-78	
A129		-48					J2-55	
A130		-47					J2-42	
A131		-46					J2-38	
A132		-45					J2-29	
A133		-44					J3-84	
A134		-43					J3-83	
A135		-42					J2-54	
A136		-41					J2-49	
A137		-40					J2-41	
A138		-39					J2-17	
A139		-38					J3-78	
A140		-37					J3-82	
A141		-36					J2-53	
A142		-35					J1-24	
A143		-34	16	OPT	30		J1-17	
A144		J12-33	17	WHT	26	AR	J1-6	

LEAD ELECTRICAL

COND IDENT	REMARKS	FROM	SEE NOTE	COLOR	SIZE AWG	LENGTH	TO	REMARKS
A145		J12-32	16	OPT	30	AR	J2-78	
A146		-31					J2-70	
A147		-30					J1-53	
A148		-29					-36	
A149		-28					-21	
A150		-27					-22	
A151		-25					-84	
A152		-24					-29	
A153		-23					-39	
A154		-22					-34	
A155		-21					-30	
A156	SEE NOTE 10	-18					-55	SEE NOTE 10
A157		-17					-43	
A158		-16					-49	
A159		-15					J1-18	
A160		-13					J4-84	
A161		-12					J1-56	
A162		-11					-50	
A163		-10					-41	
A164		-9					-40	
A165		-7					-83	
A166		-6					-60	
A167		-5					-54	
A168		-4					-38	
A169		-3					-42	
A170		J12-1	16	OPT	30		J1-82	
A171		J12-183	17	WHT	26	AR	G1	SEE NOTE 13

LIST OF MATERIALS

MIT INSTRUMENTATION LAB

MANNED SPACECRAFT CENTER

MAIN HOUSING ASSE

AGC DSKY

2003994 NEXT ASSY

CODE IDENT NO 80230 SIZE J 20038

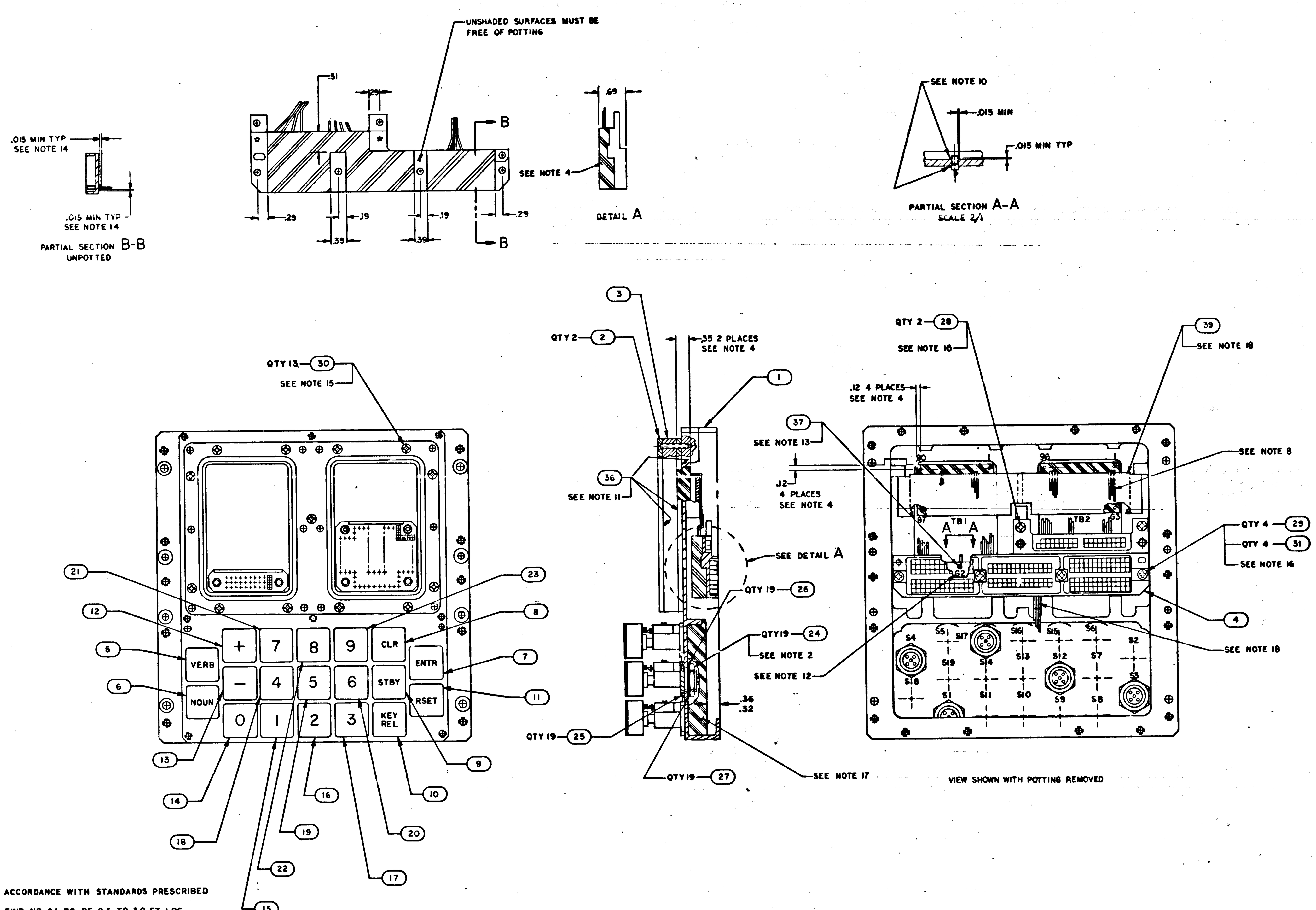
SCALE NONE

2003885 A

1 / 2003885

REVISIONS

SYM	ZONE	DESCRIPTION	DR	CHK	DATE	APPROVED



NOTES

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MOUNTING TORQUE FOR FIND NO. 24 TO BE 2.5 TO 3.0 FT-LBS
3. IDENTIFY WITH PART NO. PER ND1002019
4. ENCAPSULATE INDICATED AREAS PER ND1002236
5. SOLDER PER ND 1002071 USING SOLDER PER ND1002075
6. WELD PER ND1002005
7. AR DENOTES AS REQUIRED
8. BOND FIND NO. 32,33,38, 40 & 41 TO FIND NO. 39 PER ND1002004, TYPE IV
9. DRESS AND TRIM AT ASSEMBLY USING FIND NO. 34
10. SEAL FIND NO. 37 TO FIND NO. 1 PER ND1002004 TYPE VI
11. APPLY FIND NO. 36 TO INDICATED SURFACES OF FIND NO. 2. DO NOT APPLY TO BONDED RUBBER
12. MARK .107/.10 HIGH BLACK CHARACTERS PER ND1002019 AND ND1002122 TYPE III CLASS 2, USING MARKING INK 1006271-11
13. MOUNTING TORQUE FOR FIND NO. 37 TO BE 15-20 INCH OUNCES
14. SEAL INSULATORS ON FIND NO. 4 PER ND1002004 TYPE VI
15. MOUNTING TORQUE FOR FIND NO. 30 TO BE 3.5-4.5 INCH POUNDS
16. MOUNTING TORQUE FOR FIND NO. 28 AND FIND NO. 29 TO BE 8 TO 9 INCH POUNDS
17. ENCAPSULATE PER ND
18. BOND FIND NO. 39 & WIRES FROM S1 THRU S19 TO FIND NO. 1 PER ND1002004, TYPE IV

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
⊠	2005953	INTERCONNECTING DIAGRAM	REF
AR	1010807-22	WIRE INSULATED	41
AR	1010416-14	WIRE, INSULATED	40
1	2004898	SUPPORT, WIRE	39
AR	1010416-13	WIRE, INSULATED	38
1	2004039	TERMINAL, THREADED	37
AR	1006879	SILICONE COMPOUND	36
AR	1010416-15	WIRE, INSULATED	35
AR	1012507-003	TAPE, LACING	34
AR	1010416-20	WIRE, INSULATED	33
AR	1010848-1	WIRE, INSULATED	32
4	NAS620-6L	WASHER, FLAT	31
13	MS51959-20	SCREW, FLAT HD, CROSS RECESSED	30
4	MS51957-30	SCREW, PAN HD, CROSS RECESSED	29
2	MS51959-28	SCREW, FLAT HD, CROSS RECESSED	28
19	1010635-003	WASHER, LOCK	27
19	2004940	WASHER, PLAIN	26
19	1000159-7	O RING SEAL	25
19	2004942	NUT, HEX	24
1	2003984-211	SWITCH, ASSEMBLY PUSHBUTTON	23
1	-191		22
1	-181		21
1	-171		20
1	-161		19
1	-151		18
1	-141		17
1	-131		16
1	-121		15
1	-111		14
1	-091		13
1	-081		12
1	-071		11
1	-061		10
1	-051		9
1	-041		8
1	-031		7
1	-021		6
1	2003984-011	SWITCH, ASSEMBLY PUSHBUTTON	5
1	2003948-011	CONNECTOR, PLATE ASSEMBLY	4
1	2003959-011	ADAPTER, PLATE ASSEMBLY	3
2	1006351	GASKET, PREFORMED	2
1	2004968-011	HOUSING, FRONT	1

011 LIST OF MATERIALS

NEXT ASSY	USED ON
2003950	

APPLICATION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
CAPACITOR VALUES ARE IN μf
RESISTOR VALUES ARE IN OHMS
TOLERANCES ON FRACTIONS ± DECIMALS ±.01 ANGLES ±
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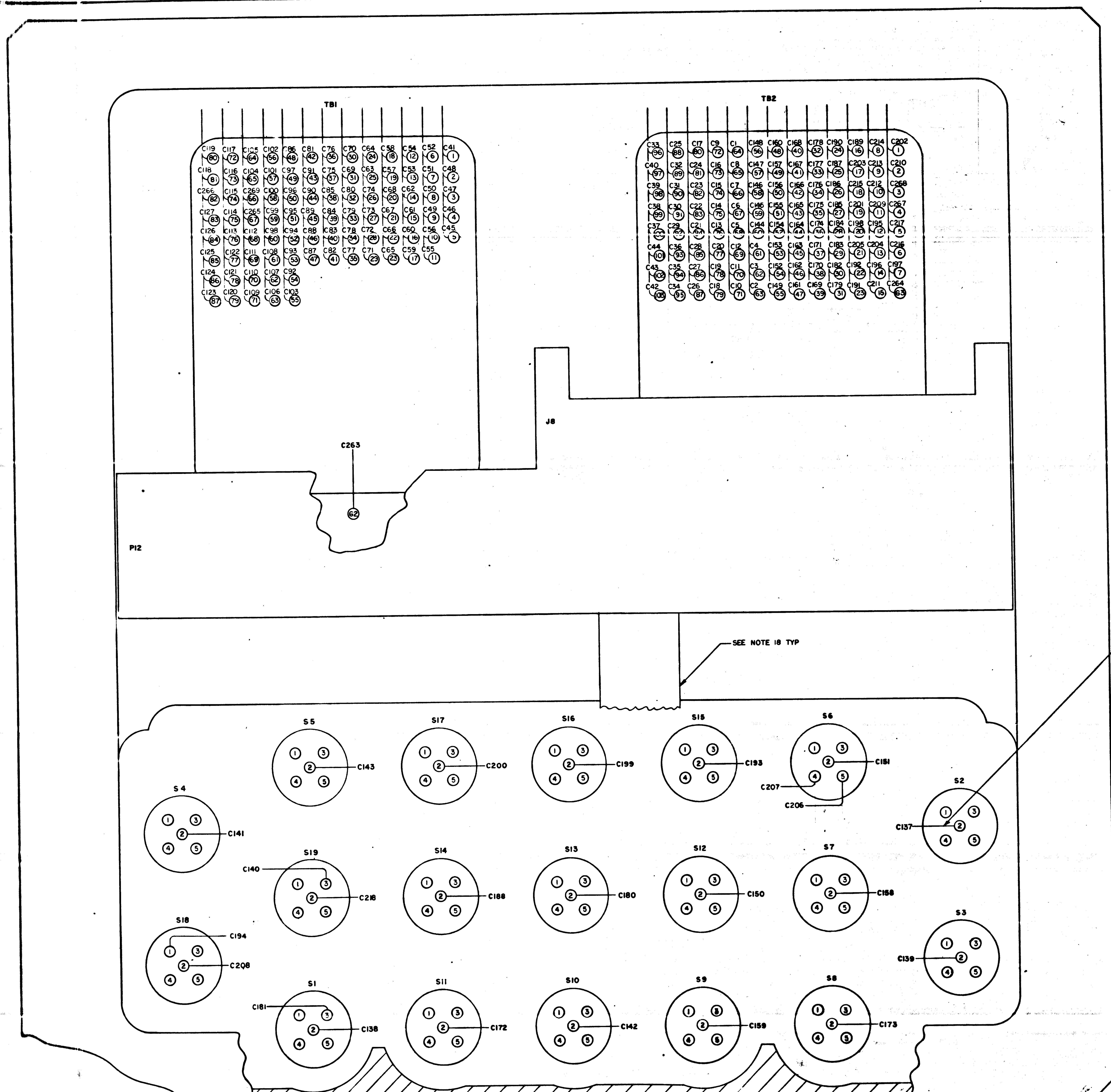
FRONT HOUSING ASSEMBLY
AGC DSKY

CODE IDENT NO.	SIZE	DRAWING NO.
80230	J	2003949

SCALE 1/1 — SHEET 1 OF 3



MASTER

QTY REQD	PART OR IDENTIFYING NO.	MATERIAL OR NOTES	NOMENCLATURE OR DESCRIPTION	FIND NO.

LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
CAPACITOR VALUES ARE IN µf
RESISTOR VALUES ARE IN OHMS
TOLERANCES ON
FRACTIONS ± DECIMALS ± ANGLES ±
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DRAWN J.P. Leonard 20DEC65
CHECKED J.C. 3FEB66
APPROVED
APPROVED
APPROVED MIT A. C. METZGER
APPROVED MSC
DATE

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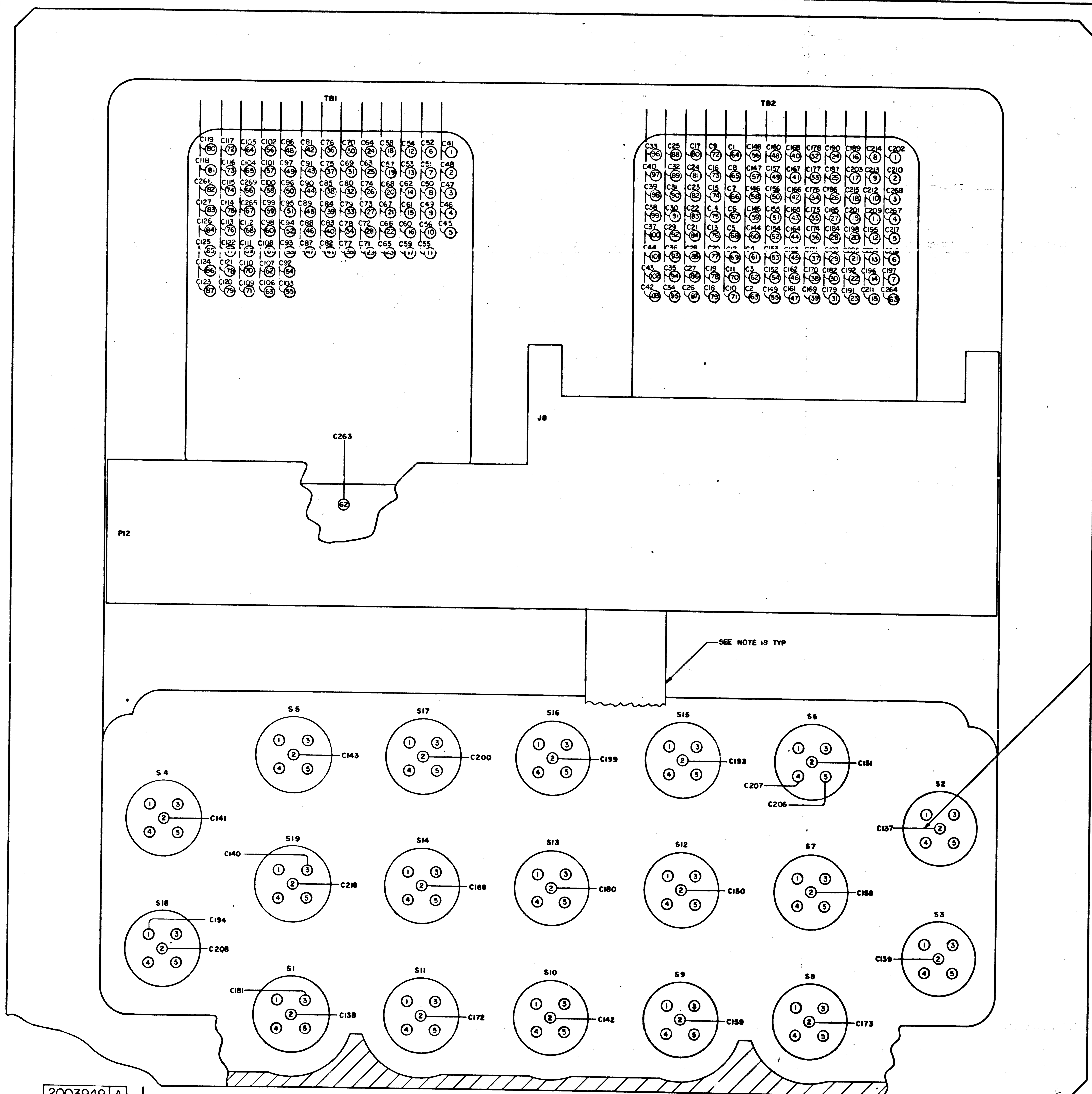
AGC DSKY

CODE IDENT NO. 80230 | SIZE J | DRAWING NO. 2003949

SCALE NONE | SHEET 2 OF 3

2003949 A

SYM	ZONE	REVISIONS DESCRIPTION	DR	CHK	DATE	APPROVED
A		REVISED PER TDRR 26856				



2003949 A

QTY REQD	PART OR IDENTIFYING NO.	MATERIAL OR NOTES	NOMENCLATURE OR DESCRIPTION	FSCM NO.

LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES CAPACITOR VALUES ARE IN µf RESISTOR VALUES ARE IN OHMS TOLERANCES ON FRACTIONS DECIMALS ANGLES DO NOT SCALE THIS DRAWING

MATERIAL

NEXT ASSY | USED ON

APPLICATION

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APPROVED MIT

APPROVED MSC

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AGC DSKY

CODE IDENT NO 80230 | SIZE J | DRAWING NO. 2003949

SCALE NONE | SHEET 2 OF 3

2003949 A

F 2/2

2003949 B

REVISIONS					
ZONE	SYMBOL	DESCRIPTION	DR	CHK	DATE
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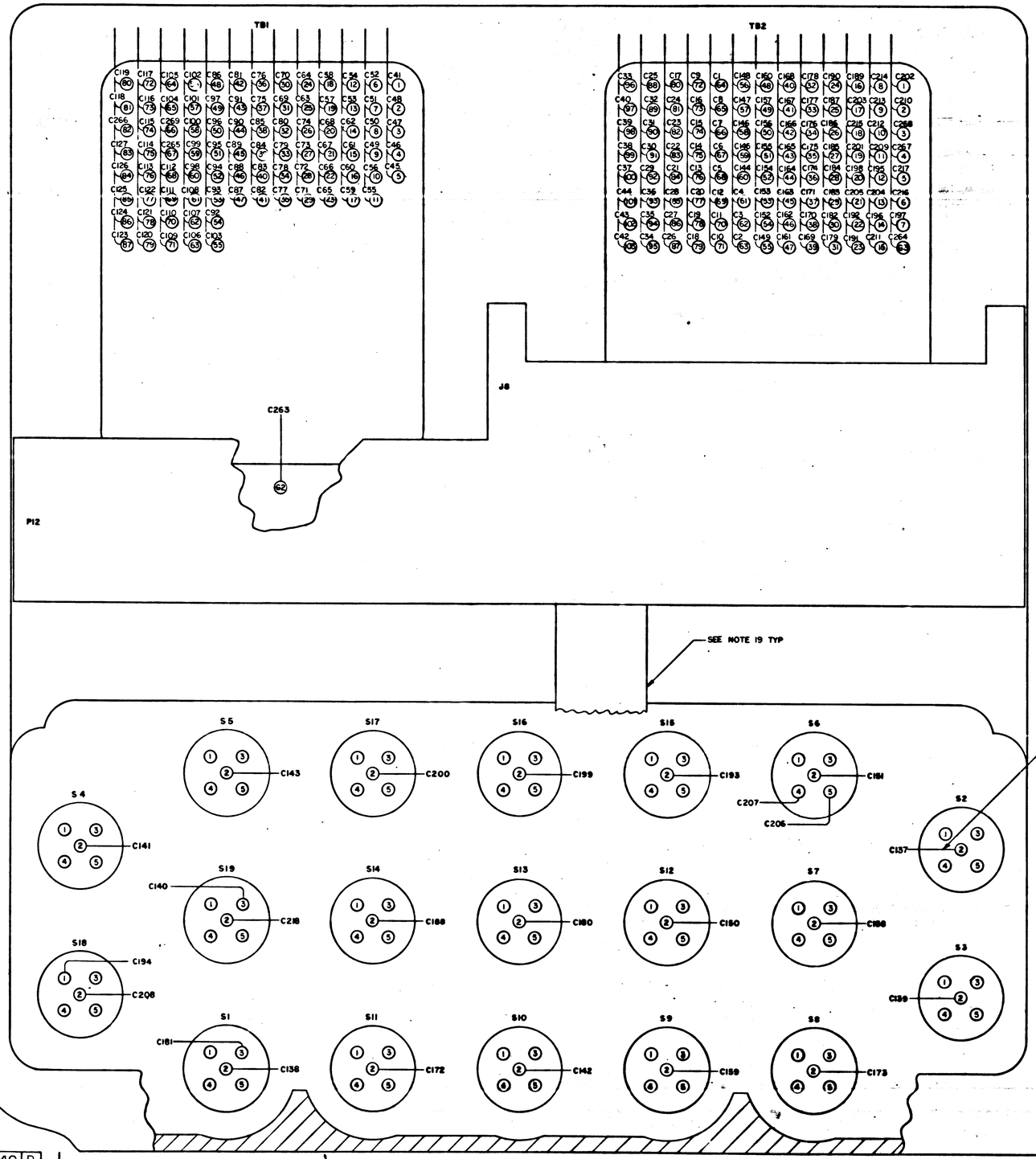
	B	REVISED PER TDRR 27913	JPT		7/24/68



QTY REQD	PART OR IDENTIFYING NO.	MATERIAL OR NOTES	NOMENCLATURE OR DESCRIPTION	FIND NO
			LIST OF MATERIALS	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. CAPACITOR VALUES ARE IN μf. TOLERANCES ON FRACTIONS ±1/64, .XX ±.02, .XXX ±.005, ANGLES ±1°. DO NOT SCALE THIS DRAWING.

MATERIAL

NEXT ASSY | USED ON

APPLICATION

MIT INSTRUMENTATION LAB CAMBRIDGE, MASS.

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

DRAWN | DATE

CHECKED | DATE

APPROVED | DATE

APPROVED MIT | DATE

APPROVED MSC | DATE

FRONT HOUSING ASSEMBLY
AGC DSKY

CODE IDENT NO. 80230 | SIZE J | DRAWING NO. 2003949

SCALE NONE | SHEET 2 OF 3

2003949 B

F-2/2 F2

REVISIONS					
SYM	ZONE	DESCRIPTION	BY	CHK	DATE	APPROVED
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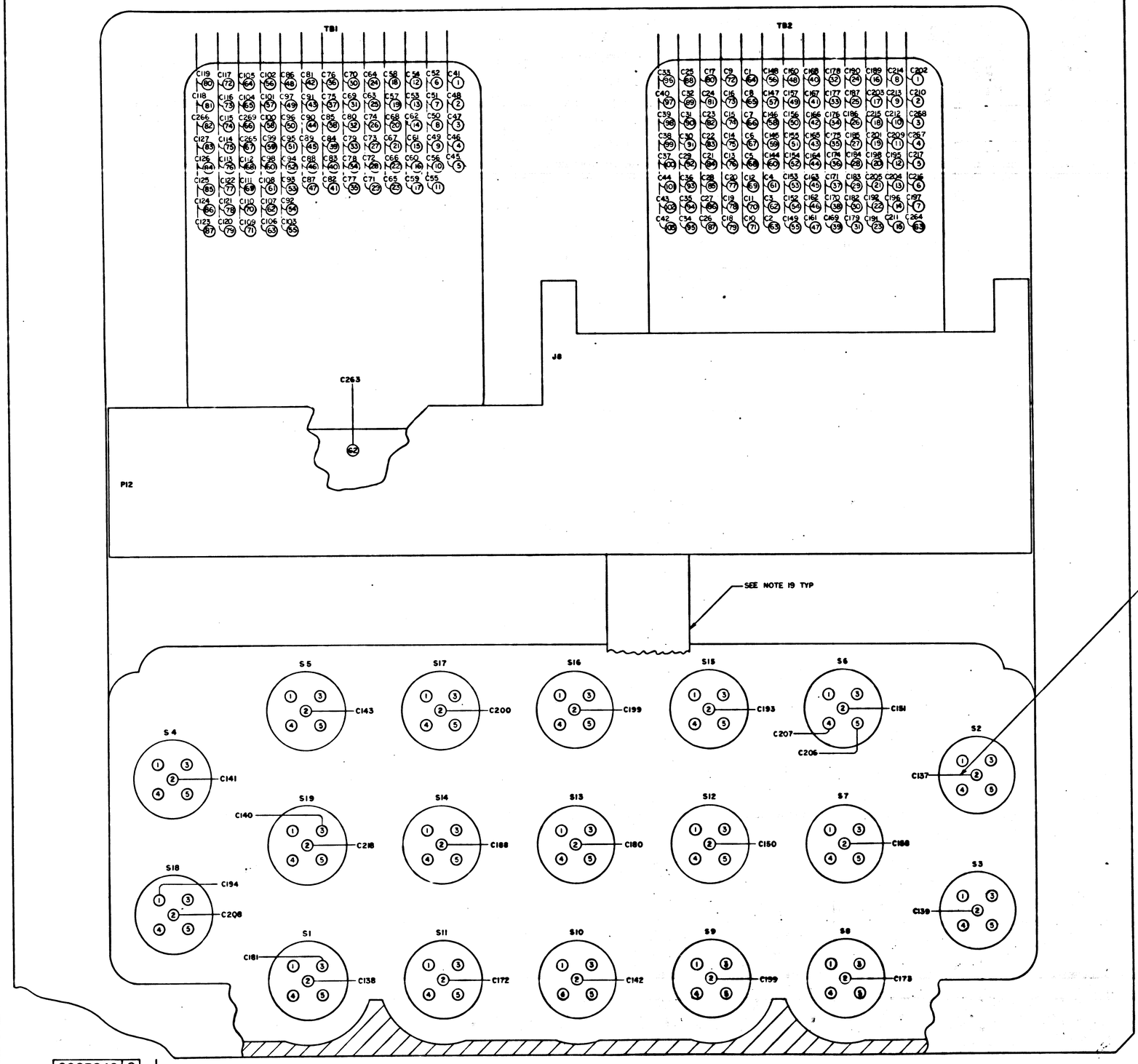
B		REVISED PER TDRR 27913				
C		REVISED PER TDRR 28178				



MASTER

QTY REQD	PART OR IDENTIFYING NO.	MATERIAL OR NOTES	NOMENCLATURE OR DESCRIPTION	REF DES

LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
CAPACITOR VALUES ARE IN
RESISTOR VALUES ARE IN OHMS
TOLERANCES ON
FRACTIONS DECIMALS ANGLES
DO NOT SCALE THIS DRAWING
MATERIAL
NEXT ASSY USED ON
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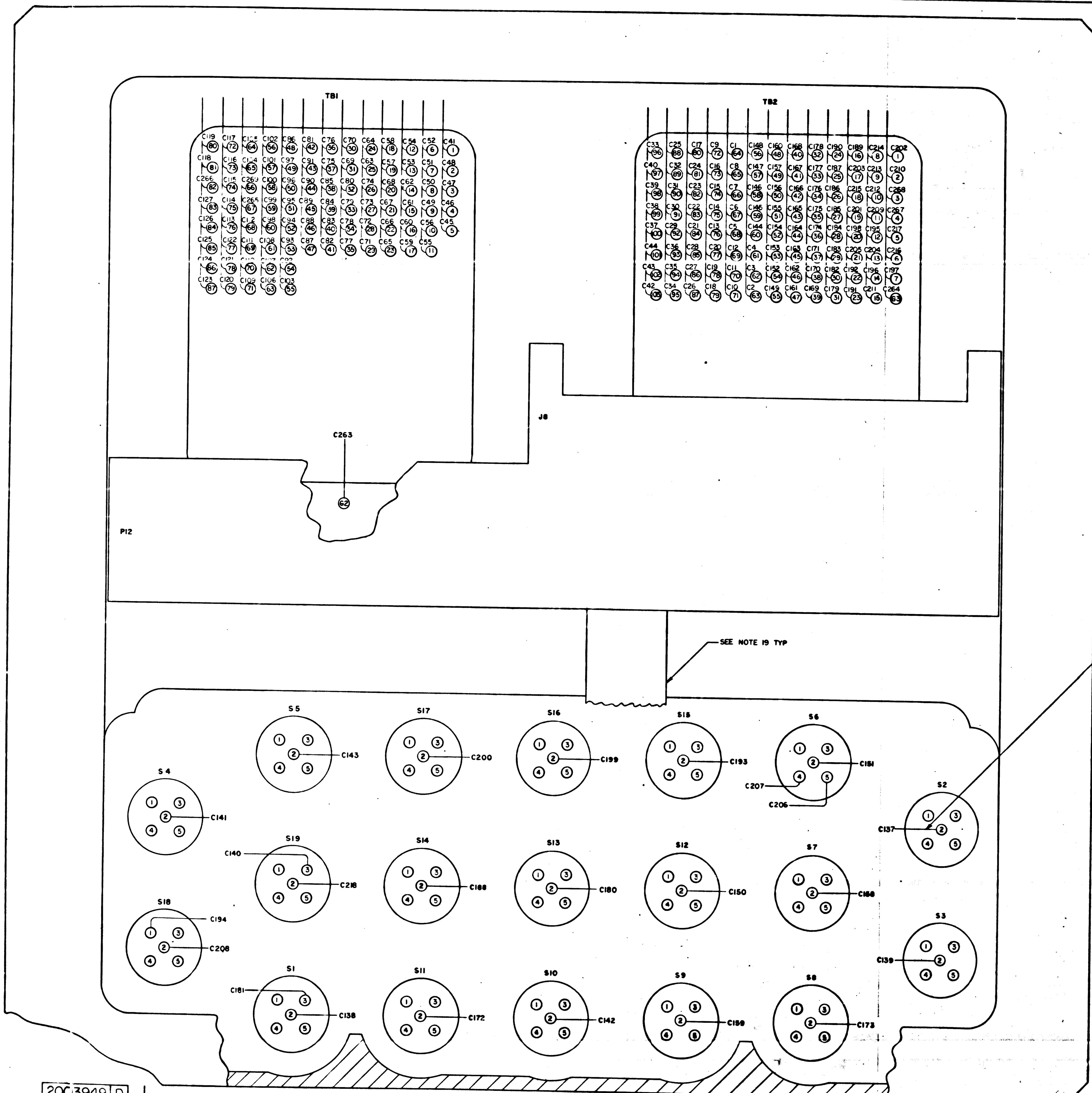
AGC DSKY

APPROVED M I T
APPROVED MSC
DATE

CODE IDENT NO. 80230 | SIZE J | DRAWING NO. 2003949

SCALE NONE | SHEET 2 OF 3



SYM	ZONE	DESCRIPTION
A		REVISED PER TDRR 26856
B		REVISED PER TDRR 27913
C		REVISED PER TDRR 28178
D		REVISED PER TDRR 29705

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MANNED SPACECRAFT CENTER, HOUSTON, TEXAS

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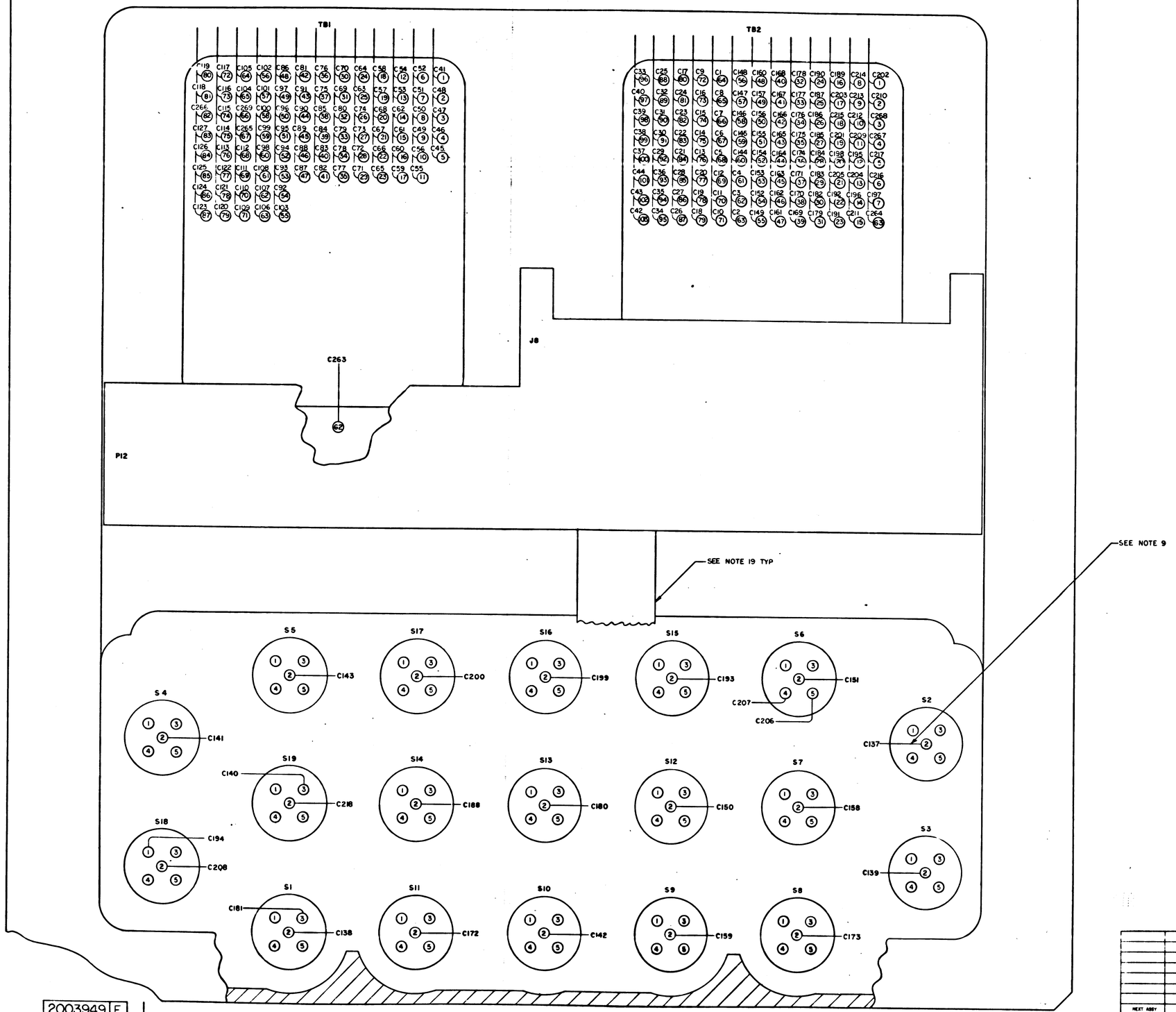
AGC DSKY

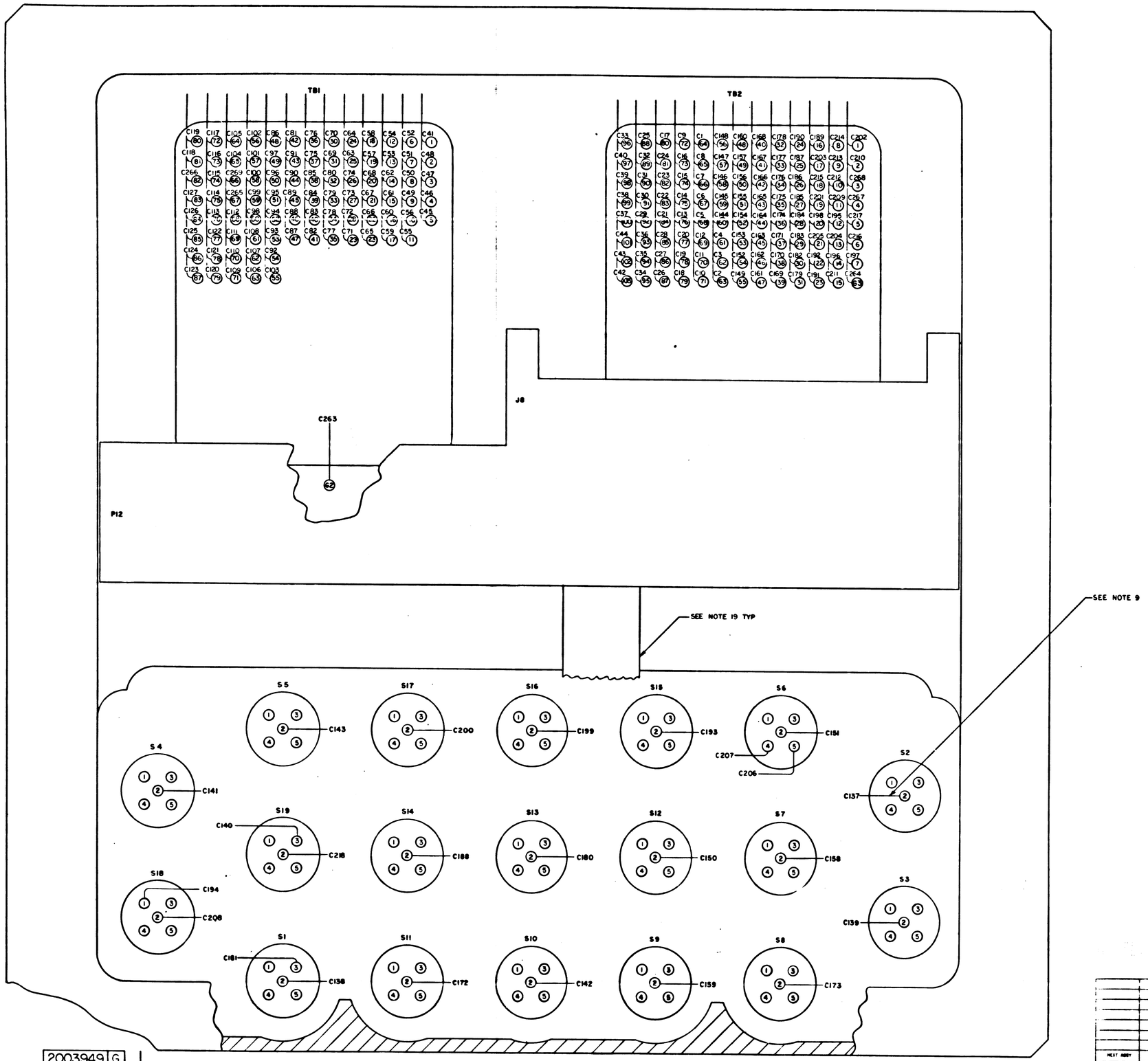
CODE IDENT NO. 80230 | SIZE J | DRAWING NO. 2003949

SCALE NONE | SHEET 2 OF 3

2003949 D

F 2/2


TB1
TB2
J8
P12
C263
SEE NOTE 19 TYP
SEE NOTE 9
S5
S17
S16
S15
S6
S4
S19
S14
S13
S12
S7
S2
S18
S1
S11
S10
S9
S8
S3


TB1
TB2
J8
C263
P12
SEE NOTE 19 TYP
SEE NOTE 9
S5
S17
S16
S15
S6
S4
S19
S14
S13
S12
S7
S2
S18
S1
S11
S10
S9
S8
S3

LEAD ELECTRICAL

FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
P12-131	32	WHT	26	AR	TB2-64	
-132					TB2-63	
-133					TB2-62	
-134					TB2-61	
-127					TB2-68	
-128					TB2-67	
-129					TB2-66	
-130					TB2-65	
-123					TB2-72	
-124					TB2-71	
-125					TB2-70	
-126					TB2-69	
-119					TB2-76	
-120					TB2-75	
-121					TB2-74	
-122					TB2-73	
-115					TB2-80	
-116					TB2-79	
-117					TB2-78	
-118					TB2-77	
-111					TB2-84	
-112					TB2-83	
-113					TB2-82	
-114					TB2-81	
-107					TB2-88	
-108					TB2-87	
-109					TB2-86	
-110					TB2-85	
-103					TB2-92	
-104					TB2-91	
-105					TB2-90	
-106					TB2-89	
-99					TB2-96	
-100					TB2-95	
-101					TB2-94	
-102					TB2-93	
-95					TB2-100	
-96					TB2-99	
-97					TB2-98	
-98					TB2-97	
-91					TB1-1	
-92					TB2-103	
-93					TB2-102	
-94					TB2-101	SEE NOTE 6
-87					TB1-5	
-88					TB1-4	
-89					TB1-3	
-90					TB1-2	
-83					TB1-9	
-84					TB1-8	
-85					TB1-7	
-86					TB1-6	
-79					TB1-13	
-80					TB1-12	
-81					TB1-11	
-82					TB1-10	
-73					TB1-19	
-74					TB1-18	
-75					TB1-17	
-76					TB1-16	
-77					TB1-15	
-78					TB1-14	
-67					TB1-25	
-68					TB1-24	
-69					TB1-23	
-70					TB1-22	
-71					TB1-21	
-72					TB1-20	
-61					TB1-31	
-62					TB1-30	
-63					TB1-29	
-64					TB1-28	
-65					TB1-27	
-66					TB1-26	
-57					TB1-37	
-58					TB1-36	
-59					TB1-35	
-60					TB1-34	
-51					TB1-33	
-52					TB1-32	
-53					TB1-42	
-54					TB1-41	
-55					TB1-40	
-56					TB1-39	
-49					TB1-38	
-50					TB1-48	
-47					TB1-47	
-48	32	WHT	26	AR	TB1-46	

LEAD ELECTRICAL

COND IDENT	REMARKS	FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
C89		P12-46	32	WHT	26	AR	TB1-45	
C90		-47					TB1-44	
C91		-48					TB1-43	
C92		-37					TB1-54	
C93		-38					TB1-53	
C94		-39					TB1-52	
C95		-40					TB1-51	
C96		-41					TB1-50	
C97		-42					TB1-49	
C98		-31					TB1-60	
C99		-32					TB1-59	
C100		-33					TB1-58	
C101		-34					TB1-57	
C102		-35					TB1-56	
C103		-36					TB1-65	
C104		-25					TB1-64	
C105		-27					TB1-63	
C106	SEE NOTE 6	-28					TB1-62	SEE NOTE 6
C107		-29					TB1-61	
C108		-30					T61-71	
C109		-21					TB1-79	
C110		-22					TB1-69	
C111		-23					TB1-68	
C112		-24					TB1-75	
C113		-13					TB1-74	
C114		-15					TB1-73	
C115		-16					TB1-72	
C116		-17					TB1-81	
C117		-18					TB1-80	
C118		-7					TB1-79	
C119		-9					TB1-78	
C120		-10					TB1-77	
C121		-11					TB1-87	
C122		-12					TB1-86	
C123		-1					TB1-85	
C124		-3					TB1-84	
C125		-4					TB1-83	
C126		-5					SI7-3	
C127		P12-6	32	WHT			S19-4	
C128		S16-1	35	YEL			S19-5	
C129		S5-4	38	RED			S1-4	
C130		S5-5	40	ORN			S1-5	
C131		S19-4	38	RED			S18-4	
C132		S19-5	40	ORN			S.6-5	
C133		S1-4	38	RED			S4-4	SEE NOTE 5
C134		S1-5	40	ORN			S4-5	
C135	SEE NOTE 5	S18-4	38	RED			S2-2	
C136		S18-5	40	ORN			S1-2	
C137		J8-3	33	WHT			S3-2	
C138		-5					S19-3	
C139		-8					S4-2	
C140		-9					S10-2	
C141		-10					S5-2	
C142		-11					TB2-60	
C143		J8-13	33				TB2-59	
C144		P12-135	32				TB2-58	SEE NOTE 6
C145		-136					TB2-57	
C146	SEE NOTE 6	-137					TB2-56	
C147		-138					TB2-55	
C148		-139					SI12-2	SEE NOTE 5
C149		P12-140	32				S6-2	
C150	SEE NOTE 5	J8-14	33				TB2-54	
C151		J8-15	33				TB2-53	
C152		P12-141	32				TB2-52	SEE NOTE 6
C153		-142					TB2-51	
C154	SEE NOTE 6	-143					TB2-50	
C155		-144					TB2-49	
C156		-145					S7-2	SEE NOTE 5
C157		P12-146	32				S9-2	
C158	SEE NOTE 5	J8-16	33				TB2-48	
C159		J8-17	33				-47	
C160		P12-147	32				-46	
C161		-148					-45	
C162		-149					-44	
C163		-150					-43	
C164		-151					-42	
C165	SEE NOTE 6	-152					-41	SEE NOTE 6
C166		-153					-40	
C167		-154					-39	
C168		-155					-38	
C169		-156					TB2-37	
C170		-157					SI1-2	SEE NOTE 5
C171		P12-158	32				S8-2	
C172	SEE NOTE 5	J8-18	33				TB2-36	
C173		J8-19	33				TB2-35	SEE NOTE 6
C174		P12-159	32				TB2-34	
C175	SEE NOTE 6	P12-160	32	WHT	26	AR		
C176		P12-161	32					

LEAD ELECTRICAL

COND IDENT	REMARKS	FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
C177		P12-162	32	WHT	26	AR	TB2-33	
C178	SEE NOTE 6	P12-163	32				TB2-32	SEE NOTE 6
C179		P12-164	32				TB2-31	
C180	SEE NOTE 5	J8-20	33				S1-3	SEE NOTE 5
C181		J8-21	33				TB2-30	
C182		P12-165	32				-29	
C183		-166					-28	
C184	SEE NOTE 6	-167					-27	SEE NOTE 6
C185		-168					-26	
C186		-169					TB2-25	
C187		P12-170	32				S14-2	
C188	SEE NOTE 5	J8-22	33				TB2-16	SEE NOTE 5
C189		P12-190	32				-24	
C190		-174					-23	SEE NOTE 6
C191	SEE NOTE 6	-175					TB2-22	
C192		P12-176	32				S15-2	
C193	SEE NOTE 5	J8-24	33				S18-1	SEE NOTE 5
C194		J8-25	33				TB2-12	
C195		P12-196	32				-14	
C196	SEE NOTE 6	-192					-7	SEE NOTE 6
C197		-204					TB2-20	
C198		P12-182	32				S16-2	
C199	SEE NOTE 5	J8-26	33				S17-2	SEE NOTE 5
C200		J8-27	33				TB2-19	
C201		P12-185	32				-1	
C202		-210					-17	SEE NOTE 6
C203	SEE NOTE 6	-187					-13	
C204		-195					TB2-21	
C205		-181	32	WHT			S6-5	
C206	SEE NOTE 5	-193	40	ORN			S6-4	SEE NOTE 5
C207		P12-194	35	BLU			S18-2	
C208		J8-20	33	WHT			TB2-11	
C209		P12-197	32	WHT			-2	
C210		-203					-15	
C211		-191					-10	
C212		-201					-9	SEE NOTE 6
C213	SEE NOTE 6	-202					-8	
C214		-203					-18	
C215		-186					-6	
C216		-207					TB2-5	
C217		-208	32	WHT			S19-2	
C218		P12-179	33	WHT			S2-3	
C219		S1-1	35	YEL			S3-3	
C220		S6-1					S4-3	
C221		S3-1					S5-3	
C222		S4-1					S6-3	
C223		S6-1					S7-3	
C224		S6-1					S8-3	
C225		S7-1					S9-3	
C226		S8-1					S10-3	
C227		S9-1					S11-3	
C228		S10-1					S12-3	
C229		S11-1					S13-3	
C230		S12-1					S14-3	
C231		S13-1					S15-3	
C232		S14-1					S16-3	
C233		S15-1	35	YEL			S5-4	
C234	SEE NOTE 5	S17-4	38	RED			S5-5	
C235		S17-5	40	ORN			S2-4	
C236		S6-4	38	RED			S2-5	
C237		S6-5	40	ORN			S7-4	
C238		S2-4	38	RED			S7-5	SEE NOTE 5
C239		S2-5	40	ORN			S3-4	
C240		S7-4	38	RED			S3-5	
C241		S7-5	40	ORN			S8-4	
C242		S3-4	38	RED			S8-5	
C243		S3-5	40	ORN			S9-4	
C244		S8-4	38	RED			S9-5	
C245		S8-5	40	ORN			S12-4	
C246		S9-4	38	RED			S12-5	
C247		S9-5	40	ORN			S15-4	
C248		S12-4	38	RED			S15-5	
C249		S12-5	40	ORN			S16-4	
C250		S15-4	38	RED			S16-5	
C251		S15-5	40	ORN			S13-4	
C252		S16-4	38	RED			S13-5	
C253		S16-5	40	ORN			S10-4	
C254		S13-4	38	RED			S10-5	
C255		S13-5	40	ORN			S11-4	
C256		S10-4	38	RED			S11-5	
C257		S10-5	40	ORN			S14-4	
C258		S11-4	38	RED			S14-5	
C259		S11-5	40	ORN			S1-4	
C260		S14-4	38	RED			S1-5	
C261		S14-5	40	ORN			S18-3	
C262		S17-1	35	YEL			62	SEE NOTE 6
C263	SEE NOTE 6	P12-184	32	WHT			63	SEE NOTE 5
C264	SEE NOTE 6	P12-183	41				TB1-67	
C265		P12-20	32				TB1-82	SEE NOTE 6
C266	SEE NOTE 6	P12-8					TB2-4	
C267		P12-173					TB2-3	
C268		P12-177					TB1-66	
C269		P12-19	32	WHT	26	AR		

MASTER

QTY REQD	PART OR IDENTIFYING NO.	MATERIAL OR NOTES	NOMENCLATURE OR DESCRIPTION	FIND NO.
			LIST OF MATERIALS	

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MATERIAL

NEXT ASSY | USED ON | APPLICATION

MIT INSTRUMENTATION LAB CAMBRIDGE, MASS.

DRAWN | CHECKED | APPROVED | APPROVED | APPROVED MIT | APPROVED MSC

DATE

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

FRONT HOUSING ASSEMBLY

AGC DSKY

CODE IDENT NO. 80230 | SIZE J | DRAWING NO. 2003949

SCALE NONE | SHEET 3 OF 3

A 2003949

REVISIONS					
SYM	ZONE	DESCRIPTION	BY	CHK	DATE	APPROVED
A		REVISED PER TDRR 26856	[illegible]	[illegible]	[illegible]	[illegible]

LEAD ELECTRICAL

FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
P12-131	32	WHT	26	A R	TB2-64	
-132					TB2-63	
-133					TB2-62	
-134					TB2-61	
-127					TB2-68	
-128					TB2-67	
-129					TB2-66	
-130					TB2-65	
-123					TB2-72	
-124					TB2-71	
-125					TB2-70	
-126					TB2-69	
-119					TB2-76	
-120					TB2-75	
-121					TB2-74	
-122					TB2-73	
-115					TB2-80	
-116					TB2-79	
-117					TB2-78	
-118					TB2-77	
-111					TB2-84	
-112					TB2-83	
-113					TB2-82	
-114					TB2-81	
-107					TB2-88	
-108					TB2-87	
-109					TB2-86	
-110					TB2-85	
-103					TB2-92	
-104					TB2-91	
-105					TB2-90	
-106					TB2-89	
-99					TB2-96	
-100					TB2-95	
-101					TB2-94	
-102					TB2-98	
-95					TB2-100	
-96					TB2-99	
-97					TB2-98	
-98					TB2-97	
-91					TBI-17	
-92					TB2-103	
-93					TB2-102	
-94					TB2-101	SEE NOTE 6
-87					TBI-5	
-88					TBI-4	
-89					TBI-3	
-90					TBI-2	
-83					TBI-9	
-84					TBI-8	
-85					TBI-7	
-86					TBI-6	
-79					TBI-13	
-80					TBI-12	
-81					TBI-11	
-82					TBI-10	
-73					TBI-19	
-74					TBI-18	
-75					TBI-17	
-76					TBI-16	
-77					TBI-15	
-78					TBI-14	
-67					TBI-25	
-68					TBI-24	
-69					TBI-23	
-70					TBI-22	
-71					TBI-21	
-72					TBI-20	
-61					TBI-31	
-62					TBI-30	
-63					TBI-29	
-64					TBI-28	
-65					TBI-27	
-66					TBI-26	
-55					TBI-37	
-56					TBI-36	
-57					TBI-35	
-58					TBI-34	
-59					TBI-33	
-60					TBI-32	
-50					TBI-42	
-51					TBI-41	
-52					TBI-40	
-53					TBI-39	
-54					TBI-38	
-43					TBI-48	
-44					TBI-47	
P12-45	32	WHT	26	A R	TBI-46	

LEAD ELECTRICAL

COND IDENT	REMARKS	FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
C89		P12-46	32	WHT	26	A R	TBI-45	
C90		-47					TBI-44	
C91		-48					TBI-43	
C92		-37					TBI-54	
C93		-38					TBI-53	
C94		-39					TBI-52	
C95		-40					TBI-51	
C96		-41					TBI-50	
C97		-42					TBI-49	
C98		-31					TBI-60	
C99		-32					TBI-59	
C100		-33					TBI-58	
C101		-34					TBI-57	
C102		-35					TBI-56	
C103		-36					TBI-55	
C104		-25					TBI-65	
C105		-27					TBI-64	
C106	SEE NOTE 6	-28					TBI-63	SEE NOTE 6
C107		-29					TBI-62	
C108		-30					TBI-61	
C109		-21					TBI-71	
C110		-22					TBI-70	
C111		-23					TBI-69	
C112		-24					TBI-68	
C113		-13					TBI-75	
C114		-15					TBI-74	
C115		-16					TBI-73	
C116		-17					TBI-72	
C117		-18					TBI-81	
C118		-7					TBI-80	
C119		-9					TBI-79	
C120		-10					TBI-78	
C121		-11					TBI-77	
C122		-12					TBI-87	
C123		-1					TBI-86	
C124		-3					TBI-85	
C125		-4					TBI-84	
C126		-5					TBI-83	
C127		P12-6	32	WHT			S17-3	
C128		S16-1	35	YEL			S19-4	
C129		S5-4	38	RED			S19-5	
C130		S5-5	40	ORN			S1-4	
C131		S19-4	38	RED			S1-5	
C132		S19-5	40	ORN			S18-4	
C133		S1-4	38	RED			S18-5	
C134		S1-5	40	ORN			S4-4	
C135	SEE NOTE 5	S18-4	38	RED			S4-5	SEE NOTE 5
C136		S18-5	40	ORN			S2-2	
C137		J8-3	33	WHT			S1-2	
C138		-5					S3-2	
C139		-8					S19-3	
C140		-9					S4-2	
C141		-10					S10-2	
C142		-11					S5-2	
C143		J8-13	33				TB2-60	
C144		P12-135	32				TB2-59	
C145		-136					TB2-58	
C146	SEE NOTE 6	-137					TB2-57	SEE NOTE 6
C147		-138					TB2-56	
C148		-139					TB2-55	
C149		P12-140	32				S12-2	
C150	SEE NOTE 5	J8-14	33				S6-2	SEE NOTE 5
C151		J8-15	33				TB2-54	
C152		P12-141	32				TB2-53	
C153		-142					TB2-52	
C154	SEE NOTE 6	-143					TB2-51	SEE NOTE 6
C155		-144					TB2-50	
C156		-145					TB2-49	
C157		P12-146	32				S7-2	
C158	SEE NOTE 5	J8-16	33				S9-2	SEE NOTE 5
C159		J8-17	33				TB2-48	
C160		P12-147	32				-47	
C161		-148					-46	
C162		-149					-45	
C163		-150					-44	
C164		-151					-43	
C165	SEE NOTE 6	-152					-42	SEE NOTE 6
C166		-153					-41	
C167		-154					-40	
C168		-155					-39	
C169		-156					-38	
C170		-157					TB2-37	
C171		P12-158	32				S11-2	
C172	SEE NOTE 5	J8-18	33				S8-2	SEE NOTE 5
C173		J8-19	33				TB2-36	
C174		P12-159	32				TB2-35	
C175	SEE NOTE 6	P12-160	32				TB2-34	SEE NOTE 6
C176		P12-161	32	WHT	26	A R		

LEAD ELECTRICAL

COND IDENT	REMARKS	FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
C177		P12-162	32	WHT	26	A R	TB2-33	
C178	SEE NOTE 6	P12-163	32				TB2-32	SEE NOTE 6
C179		P12-164	32				TB2-31	
C180	SEE NOTE 5	J8-20	33				S13-2	SEE NOTE 5
C181		J8-21	33				S1-3	
C182		P12-165	32				TB2-30	
C183		-166					-29	
C184	SEE NOTE 6	-167					-28	SEE NOTE 6
C185		-168					-27	
C186		-169					-26	
C187		P12-170	32				TB2-25	
C188	SEE NOTE 5	J8-22	33				S14-2	SEE NOTE 5
C189		P12-190	32				TB2-16	
C190	SEE NOTE 6	-174					-24	SEE NOTE 6
C191		-175					-23	
C192		P12-176	32				TB2-22	
C193	SEE NOTE 5	J8-24	33				S15-2	SEE NOTE 5
C194		J8-25	33				S18-1	
C195		P12-196	32				TB2-12	
C196	SEE NOTE 6	-192					-14	SEE NOTE 6
C197		-204					-7	
C198		P12-182	32				TB2-20	
C199	SEE NOTE 5	J8-26	33				S16-2	SEE NOTE 5
C200		J8-27	33				S17-2	
C201		P12-185	32				TB2-19	
C202		-210					-1	
C203	SEE NOTE 6	-187					-17	SEE NOTE 6
C204		-195					-13	
C205		-181	32	WHT			TB2-21	
C206	SEE NOTE 5	-193	40	ORN			S6-5	
C207		P12-194	38	RED			S6-4	SEE NOTE 5
C208		J8-30	33	WHT			S18-2	
C209		P12-197	32	WHT			TB2-11	
C210		-209					-2	
C211		-191					-15	
C212		-201					-10	
C213	SEE NOTE 6	-202					-9	SEE NOTE 6
C214		-203					-8	
C215		-186					-18	
C216		-207					-6	
C217		-208	32	WHT			TB2-5	
C218		P12-179	33	WHT			S19-2	
C219		S1-1	35	YEL			S2-3	
C220		S2-1					S3-3	
C221		S3-1					S4-3	
C222		S4-1					S5-3	
C223		S5-1					S6-3	
C224		S6-1					S7-3	
C225		S7-1					S8-3	
C226		S8-1					S9-3	
C227		S9-1					S10-3	
C228		S10-1					S11-3	
C229		S11-1					S12-3	
C230		S12-1					S13-3	
C231		S13-1					S14-3	
C232		S14-1					S15-3	
C233		S15-1	35	YEL			S16-3	
C234	SEE NOTE 5	S17-4	38	RED			S5-4	
C235		S17-5	40	ORN			S5-5	
C236		S6-4	38	RED			S2-4	
C237		S6-5	40	ORN			S2-5	
C238		S2-4	38	RED			S7-4	
C239		S2-5	40	ORN			S7-5	SEE NOTE 5
C240		S7-4	38	RED			S3-4	
C241		S7-5	40	ORN			S3-5	
C242		S3-4	38	RED			S8-4	
C243		S3-5	40	ORN			S8-5	
C244		S8-4	38	RED			S9-4	
C245		S8-5	40	ORN			S9-5	
C246		S9-4	38	RED			S12-4	
C247		S9-5	40	ORN			S12-5	
C248		S12-4	38	RED			S15-4	
C249		S12-5	40	ORN			S15-5	
C250		S15-4	38	RED			S16-4	
C251		S15-5	40	ORN			S16-5	
C252		S16-4	38	RED			S13-4	
C253		S16-5	40	ORN			S13-5	
C254		S13-4	38	RED			S10-4	
C255		S13-5	40	ORN			S10-5	
C256		S10-4	38	RED			S11-4	
C257		S10-5	40	ORN			S11-5	
C258		S11-4	38	RED			S14-4	
C259		S11-5	40	ORN			S14-5	
C260		S14-4	38	RED			S17-4	
C261		S14-5	40	ORN			S17-5	
C262		S17-1	35	YEL			S18-3	
C263	SEE NOTE 3	P12-184	32	WHT			62	SEE NOTE 6
C264	SEE NOTE 6	P12-183	41				63	SEE NOTE 5
C265		P12-20	32				TBI-67	
C266	SEE NOTE 6	P12-8					TBI-82	SEE NOTE 6
C267		P12-175					TB2-4	
C268		P12-177					TB2-3	
C269		P12-19	32	WHT	26	A R	TBI-66	

QTY REQD	PART OR IDENTIFYING NO.	MATERIAL OR NOTES	NOMENCLATURE OR DESCRIPTION	FIND NO

LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
CAPACITOR VALUES ARE IN μf
RESISTOR VALUES ARE IN OHMS
TOLERANCES ON
FRACTIONS DECIMALS ANGLES
± ± ±
DO NOT SCALE THIS DRAWING

MATERIAL

NEXT ASSY USED ON
APPLICATION

M.I.T. INSTRUMENTATION LAB CAMBRIDGE, MASS.

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

DRAWN [illegible] 12/64
CHECKED [illegible] 12/64
APPROVED [illegible] 12/64
APPROVED [illegible] 12/64
APPROVED M.I.T. [illegible]
APPROVED NASA-MSC

FRONT HOUSING ASSEMBLY

AGC DSKY

CODE IDENT NO 80230 | SIZE J | DRAWING NO 2003949

DATE | SCALE NONE | SHEET 3 OF 3

2003949 A

F2/2

2003949 A

REVISIONS					
LTR	ZONE	DESCRIPTION	BY	CHK	DATE	APPROVED
A		REVISED PER TDRR 26856	[illegible]	[illegible]	[illegible]	[illegible]
B		REVISED PER TDRR 27913	[illegible]	[illegible]	[illegible]	[illegible]

LEAD ELECTRICAL

HARNESS	FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
	P12-131	32	WHT	26	AR	TB2-64	
	-132					TB2-63	
	-133					TB2-62	
	-134					TB2-61	
	-127					TB2-68	
	-128					TB2-67	
	-129					TB2-66	
	-130					TB2-65	
	-123					TB2-72	
	-124					TB2-71	
	-125					TB2-70	
	-126					TB2-69	
	-119					TB2-76	
	-120					TB2-75	
	-121					TB2-74	
	-122					TB2-73	
	-115					TB2-80	
	-116					TB2-79	
	-117					TB2-78	
	-118					TB2-77	
	-111					TB2-84	
	-112					TB2-83	
	-113					TB2-82	
	-114					TB2-81	
	-107					TB2-88	
	-108					TB2-87	
	-109					TB2-86	
	-110					TB2-85	
	-103					TB2-92	
	-104					TB2-91	
	-105					TB2-90	
	-106					TB2-89	
	-99					TB2-96	
	-100					TB2-95	
	-101					TB2-94	
	-102					TB2-93	
	-95					TB2-100	
	-96					TB2-99	
	-97					TB2-98	
	-98					TB2-97	
	-91					TB1-1	
	-92					TB2-103	
	-93					TB2-102	
E NOTE 6	-94					TB2-101	SEE NOTE 6
	-87					TB1-5	
	-88					TB1-4	
	-89					TB1-3	
	-90					TB1-2	
	-83					TB1-9	
	-84					TB1-8	
	-85					TB1-7	
	-86					TB1-6	
	-79					TB1-13	
	-80					TB1-12	
	-81					TB1-11	
	-82					TB1-10	
	-73					TB1-19	
	-74					TB1-18	
	-75					TB1-17	
	-76					TB1-16	
	-77					TB1-15	
	-78					TB1-14	
	-67					TB1-25	
	-68					TB1-24	
	-69					TB1-23	
	-70					TB1-22	
	-71					TB1-21	
	-72					TB1-20	
	-61					TB1-31	
	-62					TB1-30	
	-63					TB1-29	
	-64					TB1-28	
	-65					TB1-27	
	-66					TB1-26	
	-55					TB1-37	
	-56					TB1-36	
	-57					TB1-35	
	-58					TB1-34	
	-59					TB1-33	
	-60					TB1-32	
	-50					TB1-42	
	-51					TB1-41	
	-52					TB1-40	
	-53					TB1-39	
	-54					TB1-38	
	-43					TB1-48	
	-44					TB1-47	
	P12-45	32	WHT	26	AR	TB1-46	

LEAD ELECTRICAL

COND IDENT	REMARKS	FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
C89		P12-46	32	WHT	26	AR	TB1-45	
C90		-47					TB1-44	
C91		-48					TB1-43	
C92		-37					TB1-54	
C93		-38					TB1-53	
C94		-39					TB1-52	
C95		-40					TB1-51	
C96		-41					TB1-50	
C97		-42					TB1-49	
C98		-31					TB1-60	
C99		-32					TB1-59	
C100		-33					TB1-58	
C101		-34					TB1-57	
C102		-35					TB1-56	
C103		-36					TB1-57	
C104		-25					TB1-65	
C105		-27					TB1-64	
C106	SEE NOTE 6	-28					TB1-63	SEE NOTE 6
C107		-29					TB1-62	
C108		-30					TB1-61	
C109		-21					TB1-71	
C110		-22					TB1-70	
C111		-23					TB1-69	
C112		-24					TB1-68	
C113		-13					TB1-76	
C114		-15					TB1-75	
C115		-16					TB1-74	
C116		-17					TB1-73	
C117		-18					TB1-72	
C118		-7					TB1-81	
C119		-9					TB1-80	
C120		-10					TB1-79	
C121		-11					TB1-78	
C122		-12					TB1-77	
C123		-1					TB1-87	
C124		-3					TB1-86	
C125		-4					TB1-85	
C126		-5					TB1-84	
C127		P12-6	32	WHT			TB1-83	
C128		S16-1	35	YEL			S17-3	
C129		S5-4	38	RED			S19-4	
C130		S5-5	40	ORN			S19-5	
C131		S19-4	38	RED			S1-4	
C132		S19-5	40	ORN			S1-5	
C133		S1-4	38	RED			S18-4	
C134		S1-5	40	ORN			S18-5	
C135	SEE NOTE 5	S18-4	38	RED			S4-4	SEE NOTE 5
C136		S18-5	40	ORN			S4-5	
C137		J8-3	33	WHT			S2-2	
C138		-5					S1-2	
C139		-8					S3-2	
C140		-9					S19-3	
C141		-10					S4-2	
C142		-11					S10-2	
C143		J8-13	33				S5-2	
C144		P12-135	32				TB2-60	
C145		-136					TB2-59	
C146	SEE NOTE 6	-137					TB2-58	SEE NOTE 6
C147		-138					TB2-57	
C148		-139					TB2-56	
C149		P12-140	32				TB2-55	
C150	SEE NOTE 5	J8-14	33				S12-2	SEE NOTE 5
C151		J8-15	33				S6-2	
C152		P12-141	32				TB2-54	
C153		-142					TB2-53	
C154	SEE NOTE 6	-143					TB2-52	SEE NOTE 6
C155		-144					TB2-51	
C156		-145					TB2-50	
C157		P12-146	32				TB2-49	
C158	SEE NOTE 5	J8-16	33				S7-2	SEE NOTE 5
C159		J8-17	33				S9-2	
C160		P12-147	32				TB2-48	
C161		-148					-47	
C162		-149					-46	
C163		-150					-45	
C164		-151					-44	
C165	SEE NOTE 6	-152					-43	SEE NOTE 6
C166		-153					-42	
C167		-154					-41	
C168		-155					-40	
C169		-156					-39	
C170		-157					-38	
C171		P12-158	32				TB2-37	
C172	SEE NOTE 5	J8-18	33				S11-2	SEE NOTE 5
C173		J8-19	33				S8-2	
C174		P12-159	32				TB2-36	
C175	SEE NOTE 6	P12-160	32				TB2-35	SEE NOTE 6
C176		P12-161	32	WHT	26	AR	TB2-34	

LEAD ELECTRICAL

COND IDENT	REMARKS	FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
C177		P12-162	32	WHT	26	AR	TB2-33	
C178	SEE NOTE 6	P12-163	32				TB2-32	SEE NOTE 6
C179		P12-164	32				TB2-31	
C180	SEE NOTE 5	J8-20	33				S13-2	SEE NOTE 5
C181		J8-21	33				S1-3	
C182		P12-165	32				TB2-30	
C183		-166					-29	
C184	SEE NOTE 6	-167					-28	SEE NOTE 6
C185		-168					-27	
C186		-169					-26	
C187		P12-170	32				TB2-25	
C188	SEE NOTE 5	J8-22	33				S14-2	SEE NOTE 5
C189		P12-190	32				TB2-16	
C190		-174					-24	
C191	SEE NOTE 6	-175					-23	SEE NOTE 6
C192		P12-176	32				TB2-22	
C193	SEE NOTE 5	J8-24	33				S15-2	SEE NOTE 5
C194		J8-25	33				S18-1	
C195		P12-196	32				TB2-12	
C196	SEE NOTE 6	-192					-14	SEE NOTE 6
C197		-204					-7	
C198		P12-182	32				TB2-20	
C199	SEE NOTE 5	J8-26	33				S16-2	SEE NOTE 5
C200		J8-27	33				S17-2	
C201		P12-185	32				TB2-19	
C202	SEE NOTE 6	-210					-1	SEE NOTE 6
C203		-187					-17	
C204		-198					-13	
C205		-181	32	WHT			TB2-21	
C206	SEE NOTE 6	-193	40	ORN			S6-5	
C207		P12-194	38	RED			S6-4	SEE NOTE 5
C208		J8-30	33				S16-4	
C209		P12-197	32	WHT			TB2-11	
C210		-209					-2	
C211		-191					-15	
C212	SEE NOTE 6	-201					-10	SEE NOTE 6
C213		-202					-9	
C214		-203					-8	
C215		-186					-18	
C216		-207					-6	
C217		-208	32	WHT			TB2-5	
C218		P12-179	33	WHT			S19-2	
C219		S1-1	35	YEL			S2-3	
C220		S2-1					S3-3	
C221		S3-1					S4-3	
C222		S4-1					S5-3	
C223		S6-1					S6-3	
C224		S6 1					S7-3	
C225		S7-1					S8-3	
C226		S8-1					S9-3	
C227		S9-1					S10-3	
C228		S10-1					S11-3	
C229		S11-1					S12-3	
C230		S12-1					S13-3	
C231		S13-1					S14-3	
C232		S14-1					S15-3	
C233		S15-1	35	YEL			S16-3	
C234	SEE NOTE 5	S17-4	38	RED			S5-4	
C235		S17-5	40	ORN			S5-5	
C236		S6-4	38	RED			S2-4	
C237		S6-5	40	ORN			S2-5	
C238		S2-4	38	RED			S7-4	
C239		S2-5	40	ORN			S7-5	SEE NOTE 5
C240		S7-4	38	RED			S3-4	
C241		S7-5	40	ORN			S3-5	
C242		S3-4	38	RED			S8-4	
C243		S3-5	40	ORN			S8-5	
C244		S8-4	38	RED			S9-4	
C245		S8-5	40	ORN			S9-5	
C246		S9-4	38	RED			S12-4	
C247		S9-5	40	ORN			S12-5	
C248		S12-4	38	RED			S15-4	
C249		S12-5	40	ORN			S15-5	
C250		S15-4	38	RED			S16-4	
C251		S15-5	40	ORN			S16-5	
C252		S16-4	38	RED			S13-4	
C253		S16-5	40	ORN			S13-5	
C254		S13-4	38	RED			S10-4	
C255		S13-5	40	ORN			S10-5	
C256		S10-4	38	RED			S11-4	
C257		S10-5	40	ORN			S14-4	
C258		S11-4	38	RED			S14-5	
C259		S11-5	40	ORN			S17-4	
C260		S14-4	38	RED			S17-5	
C261		S14-5	40	ORN			S7-5	
C262		S17-1	35	YEL			-3	
C263	SEE NOTE 6	P12-184	32	WHT			62	SE. NOTE 6
C264	SEE NOTE 6	P12-183	41				63	SEE NOTE 5
C265		P12-20	32				TB1-67	
C266	SEE NOTE 6	P12-8					TB1-82	SEE NOTE 6
C267		P12-173					TB2-4	
C268		P12-177					TB2-3	
C269		P12-19	32	WHT	26	AR	TB1-86	

QTY REQD	PART OR IDENTIFYING NO.	MATERIAL OR NOTES	NOMENCLATURE OR DESCRIPTION	FIND NO.
	MIT INSTRUMENTATION LAB		LIST OF MATERIALS	
			MANNED SPACECRAFT CENTER HOUSTON, TEXAS	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ± DO NOT SCALE THIS DRAWING. NEXT ASSY | USED ON | APPLICATION

DRAWN [illegible] CHECKED [illegible] APPROVED [illegible] APPROVED [illegible] APPROVED MIT [illegible] APPROVED MSC

FRONT HOUSING ASSEMBLY
AGC DSKY

CODE IDENT NO. 80230 | SIZE J | DRAWING NO. 2003949 | SCALE NONE | SHEET 3 OF 3

2003949 B

2003949 C

REVISIONS					
SYM	ZONE	DESCRIPTION	DR	CHK	DATE / APPROVED
A		REVISED PER TDRR 26856			
B		REVISED PER TDRR 27913			
C		REVISED PER TDRR 28178			

LEAD ELECTRICAL

FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
P12-131	32	WHT	26	AR	TB2-64	
-132					TB2-63	
-133					TB2-62	
-134					TB2-61	
-127					TB2-68	
-128					TB2-67	
-129					TB2-66	
-130					TB2-65	
-123					TB2-72	
-124					TB2-71	
-125					TB2-70	
-126					TB2-69	
-119					TB2-76	
-120					TB2-75	
-121					TB2-74	
-122					TB2-73	
-115					TB2-80	
-116					TB2-79	
-117					TB2-78	
-118					TB2-77	
-111					TB2-84	
-112					TB2-83	
-113					TB2-82	
-114					TB2-81	
-107					TB2-88	
-108					TB2-87	
-109					TB2-86	
-110					TB2-85	
-103					TB2-92	
-104					TB2-91	
-105					TB2-90	
-106					TB2-89	
-99					TB2-96	
-100					TB2-95	
-101					TB2-94	
-102					TB2-93	
-95					TB2-100	
-96					TB2-99	
-97					TB2-98	
-98					TB2-97	
-91					TB1-1	
-92					TB2-103	
-93					TB2-102	
-94					TB2-101	SEE NOTE 6
-87					TB1-5	
-88					TB1-4	
-89					TB1-3	
-90					TB1-2	
-83					TB1-9	
-84					TB1-8	
-85					TB1-7	
-86					TB1-6	
-79					TB1-13	
-80					TB1-12	
-81					TB1-11	
-82					TB1-10	
-73					TB1-19	
-74					TB1-18	
-75					TB1-17	
-76					TB1-16	
-77					TB1-15	
-78					TB1-14	
-67					TB1-25	
-68					TB1-24	
-69					TB1-23	
-70					TB1-22	
-71					TB1-21	
-72					TB1-20	
-61					TB1-31	
-62					TB1-30	
-63					TB1-29	
-64					TB1-28	
-65					TB1-27	
-66					TB1-26	
-55					TB1-37	
-56					TB1-36	
-57					TB1-35	
-58					TB1-34	
-59					TB1-33	
-60					TB1-32	
-50					TB1-42	
-51					TB1-41	
-52					TB1-40	
-53					TB1-39	
-54					TB1-38	
-43					TB1-48	
-44					TB1-47	
P12-45	32	WHT	26	AR	TB1-46	

LEAD ELECTRICAL

COND IDENT	REMARKS	FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
C89		P12-46	32	WHT	26	AR	TB1-45	
C90		-47					TB1-44	
C91		-48					TB1-43	
C92		-37					TB1-54	
C93		-38					TB1-53	
C94		-39					TB1-52	
C95		-40					TB1-51	
C96		-41					TB1-50	
C97		-42					TB1-49	
C98		-31					TB1-60	
C99		-32					TB1-59	
C100		-33					TB1-58	
C101		-34					TB1-57	
C102		-35					TB1-56	
C103		-36					TB1-57	
C104		-25					TB1-65	
C105		-27					TB1-64	
C106	SEE NOTE 6	-28					TB1-63	SEE NOTE 6
C107		-29					TB1-62	
C108		-30					TB1-61	
C109		-21					TB1-71	
C110		-22					TB1-70	
C111		-23					TB1-69	
C112		-24					TB1-68	
C113		-13					TB1-76	
C114		-15					TB1-75	
C115		-16					TB1-74	
C116		-17					TB1-73	
C117		-18					TB1-72	
C118		-7					TB1-81	
C119		-9					TB1-80	
C120		-10					TB1-79	
C121		-11					TB1-78	
C122		-12					TB1-77	
C123		-1					TB1-87	
C124		-3					TB1-86	
C125		-4					TB1-85	
C126		-5					TB1-84	
C127		P12-6	32	WHT			TB1-83	
C128		S16-1	35	YEL			S17-3	
C129		S5-4	38	RED			S19-4	
C130		S5-5	40	ORN			S19-5	
C131		S19-4	38	RED			S1-4	
C132		S19-5	40	ORN			S1-5	
C133		S1-4	38	RED			S18-4	
C134		S1-5	40	ORN			S18-5	
C135	SEE NOTE 5	S18-4	38	RED			S4-4	SEE NOTE 5
C136		S18-5	40	ORN			S4-5	
C137		J8-3	33	WHT			S2-2	
C138		-5					S1-2	
C139		-8					S3-2	
C140		-9					S19-3	
C141		-10					S4-2	
C142		-11					S10-2	
C143		J8-13	33				S5-2	
C144		P12-135	32				TB2-60	
C145		-136					TB2-59	
C146	SEE NOTE 6	-137					TB2-58	SEE NOTE 6
C147		-138					TB2-57	
C148		-139					TB2-56	
C149		P12-140	32				TB2-55	
C150	SEE NOTE 5	J8-14	33				S12-2	SEE NOTE 5
C151		J8-15	33				S6-2	
C152		P12-141	32				TB2-54	
C153		-142					TB2-53	
C154	SEE NOTE 6	-143					TB2-52	SEE NOTE 6
C155		-144					TB2-51	
C156		-145					TB2-50	
C157		P12-146	32				TB2-49	
C158	SEE NOTE 5	J8-16	33				S7-2	SEE NOTE 5
C159		J8-17	33				S9-2	
C160		P12-147	32				TB2-48	
C161		-148					-47	
C162		-149					-46	
C163		-150					-45	
C164		-151					-44	
C165	SEE NOTE 6	-152					-43	SEE NOTE 6
C166		-153					-42	
C167		-154					-41	
C168		-155					-40	
C169		-156					-39	
C170		-157					-38	
C171		P12-158	32				TB2-37	
C172	SEE NOTE 5	J8-18	33				S11-2	SEE NOTE 5
C173		J8-19	33				S8-2	
C174		P12-159	32				TB2-36	
C175	SEE NOTE 6	P12-160	32				TB2-35	SEE NOTE 6
C176		P12-161	32	WHT	26	AR	TB2-34	

LEAD ELECTRICAL

COND IDENT	REMARKS	FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
C177		P12-162	32	WHT	26	AR	TB2-33	
C178	SEE NOTE 6	P12-163	32				TB2-32	SEE NOTE 6
C179		P12-164	32				TB2-31	
C180	SEE NOTE 5	J8-20	33				S13-2	SEE NOTE 5
C181		J8-21	33				S1-3	
C182		P12-165	32				TB2-30	
C183		-166					-29	
C184	SEE NOTE 6	-167					-28	SEE NOTE 6
C185		-168					-27	
C186		-169					-26	
C187		P12-170	32				TB2-25	
C188	SEE NOTE 5	J8-22	33				S14-2	SEE NOTE 5
C189		P12-190	32				TB2-16	
C190	SEE NOTE 6	-174					-24	SEE NOTE 6
C191		-175					-23	
C192		P12-176	32				TB2-22	
C193	SEE NOTE 5	J8-24	33				S15-2	SEE NOTE 5
C194		J8-25	33				S18-1	
C195		P12-196	32				TB2-12	
C196	SEE NOTE 6	-192					-14	SEE NOTE 6
C197		-204					-7	
C198		P12-182	32				TB2-20	
C199	SEE NOTE 5	J8-26	33				S16-2	SEE NOTE 5
C200		J8-27	33				S17-2	
C201		P12-185	32				TB2-19	
C202		-210					-1	
C203	SEE NOTE 6	-187					-17	SEE NOTE 6
C204		-195					-13	
C205		-181	32	WHT			TB2-21	
C206	SEE NOTE 5	-193	40	ORN			S6-5	
C207		P12-194	38	RED			S6-4	SEE NOTE 5
C208		J8-30	33	WHT			S18-2	
C209		P12-197	32	WHT			TB2-11	
C210		-209					-2	
C211		-191					-15	
C212		-201					-10	
C213	SEE NOTE 6	-202					-9	SEE NOTE 6
C214		-203					-8	
C215		-186					-18	
C216		-207					-6	
C217		-208	32	WHT			TB2-5	
C218		P12-179	33	WHT			S19-2	
C219		S1-1	35	YEL			S2-3	
C220		S2-1					S3-3	
C221		S3-1					S4-3	
C222		S4-1					S5-3	
C223		S5-1					S6-3	
C224		S6-1					S7-3	
C225		S7-1					S8-3	
C226		S8-1					S9-3	
C227		S9-1					S10-3	
C228		S10-1					S11-3	
C229		S11-1					S12-3	
C230		S12-1					S13-3	
C231		S13-1					S14-3	
C232		S14-1					S15-3	
C233		S15-1	35	YEL			S16-3	
C234	SEE NOTE 5	S17-4	38	RED			S5-4	
C235		S17-5	40	ORN			S5-5	
C236		S6-4	38	RED			S2-4	
C237		S6-5	40	ORN			S2-5	
C238		S2-4	38	RED			S7-4	
C239		S2-5	40	ORN			S7-5	SEE NOTE 5
C240		S7-4	38	RED			S3-4	
C241		S7-5	40	ORN			S3-5	
C242		S3-4	38	RED			S8-4	
C243		S3-5	40	ORN			S8-5	
C244		S8-4	38	RED			S9-4	
C245		S8-5	40	ORN			S9-5	
C246		S9-4	38	RED			S12-4	
C247		S9-5	40	ORN			S12-5	
C248		S12-4	38	RED			S15-4	
C249		S12-5	40	ORN			S15-5	
C250		S15-4	38	RED			S16-4	
C251		S15-5	40	ORN			S16-5	
C252		S16-4	38	RED			S13-4	
C253		S16-5	40	ORN			S13-5	
C254		S13-4	38	RED			S10-4	
C255		S13-5	40	ORN			S10-5	
C256		S10-4	38	RED			S11-4	
C257		S10-5	40	ORN			S11-5	
C258		S11-4	38	RED			S14-4	
C259		S11-5	40	ORN			S14-5	
C260		S14-4	38	RED			S17-4	
C261		S14-5	40	ORN			S17-5	
C262		S17-1	35	YEL			S18-3	
C263	SEE NOTE 6	P12-184	32	WHT			62	SEE NOTE 6
C264	SEE NOTE 6	P12-183	41				63	SEE NOTE 5
C265		P12-20	32				TB1-67	
C266	SEE NOTE 6	P12-8					TB1-82	SEE NOTE 6
C267		P12-173					TB2-4	
C268		P12-177					TB2-3	
C269		P12-19	32	WHT	26	AR	TB1-66	

QTY REQD	PART OR IDENTIFYING NO.	MATERIAL OR NOTES	NOMENCLATURE OR DESCRIPTION	FIND NO.

LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
CAPACITOR VALUES ARE IN µf
RESISTOR VALUES ARE IN OHMS
TOLERANCES ON FRACTIONS DECIMALS ANGLES ± ± ±
DO NOT SCALE THIS DRAWING
MATERIAL

NEXT ASSY | USED ON
APPLICATION

MIT INSTRUMENTATION LAB, CAMBRIDGE, MASS.

MANNED SPACECRAFT CENTER, HOUSTON, TEXAS

DRAWN
CHECKED
APPROVED
APPROVED
APPROVED MIT
APPROVED MSC
DATE

FRONT HOUSING ASSEMBLY

AGC DSKY

CODE IDENT NO. 80230 | SIZE J | DRAWING NO. 2003949

SCALE NONE | SHEET 3 OF 3

MASTER

2003949 C

F-2/2

REVISIONS					
LTR	ZONE	DESCRIPTION	BY	CHK	DATE	APPROVED
A		REVISED PER TDRR 26856				
B		REVISED PER TDRR 27913				
C		REVISED PER TDRR 28178				
D		REVISED PER TDRR 29705				

LEAD ELECTRICAL

COND IDENT	REMARKS	FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
			32	WHT	26	AR	TB2-64	
							TB2-63	
							TB2-62	
							TB2-61	
							TB2-68	
							TB2-67	
							TB2-66	
							TB2-65	
							TB2-72	
							TB2-71	
							TB2-70	
							TB2-69	
							TB2-76	
							TB2-75	
							TB2-74	
							TB2-73	
							TB2-80	
							TB2-79	
							TB2-78	
							TB2-77	
							TB2-84	
							TB2-83	
							TB2-82	
							TB2-81	
							TB2-88	
							TB2-87	
							TB2-86	
							TB2-85	
							TB2-92	
							TB2-91	
							TB2-90	
							TB2-89	
							TB2-96	
							TB2-95	
							TB2-94	
							TB2-93	
							TB2-100	
							TB2-99	
							TB2-98	
							TB2-97	
							TB1-1	
							TB2-103	
							TB2-102	
							TB2-101	SEE NOTE 6
							TB1-5	
							TB1-4	
							TB1-3	
							TB1-2	
							TB1-9	
							TB1-8	
							TB1-7	
							TB1-6	
							TB1-13	
							TB1-12	
							TB1-11	
							TB1-10	
							TB1-19	
							TB1-18	
							TB1-17	
							TB1-16	
							TB1-15	
							TB1-14	
							TB1-25	
							TB1-24	
							TB1-23	
							TB1-22	
							TB1-21	
							TB1-20	
							TB1-31	
							TB1-30	
							TB1-29	
							TB1-28	
							TB1-27	
							TB1-26	
							TB1-37	
							TB1-36	
							TB1-35	
							TB1-34	
							TB1-33	
							TB1-32	
							TB1-42	
							TB1-41	
							TB1-40	
							TB1-39	
							TB1-38	
							TB1-48	
							TB1-47	
32	WHT	26				AR	TB1-46	

LEAD ELECTRICAL

COND IDENT	REMARKS	FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
C89		P12-46	32	WHT	26	AR	TB1-45	
C90		-47					TB1-44	
C91		-48					TB1-43	
C92		-37					TB1-54	
C93		-38					TB1-53	
C94		-39					TB1-52	
C95		-40					TB1-51	
C96		-41					TB1-50	
C97		-42					TB1-49	
C98		-31					TB1-60	
C99		-32					TB1-59	
C100		-33					TB1-58	
C101		-34					TB1-57	
C102		-35					TB1-56	
C103		-36					TB1-55	
C104		-25					TB1-65	
C105		-27					TB1-64	
C106	SEE NOTE 6	-28					TB1-63	SEE NOTE 6
C107		-29					TB1-62	
C108		-30					TB1-61	
C109		-21					TB1-71	
C110		-22					TB1-70	
C111		-23					TB1-69	
C112		-24					TB1-68	
C113		-13					TB1-76	
C114		-15					TB1-75	
C115		-16					TB1-74	
C116		-17					TB1-73	
C117		-18					TB1-72	
C118		-7					TB1-81	
C119		-9					TB1-80	
C120		-10					TB1-79	
C121		-11					TB1-78	
C122		-12					TB1-77	
C123		-1					TB1-87	
C124		-3					TB1-86	
C125		-4					TB1-85	
C126		-5					TB1-84	
C127		P12-6	32	WHT			TB1-83	
C128		S16-1	35	YEL			S17-3	
C129		S5-4	38	RED			S19-4	
C130		S5-5	40	ORN			S19-5	
C131		S19-4	38	RED			S1-4	
C132		S19-5	40	ORN			S1-5	
C133		S1-4	38	RED			S18-4	
C134		S1-5	40	ORN			S18-5	
C135	SEE NOTE 5	S18-4	38	RED			S4-4	SEE NOTE 5
C136		S18-5	40	ORN			S4-5	
C137		J8-3	33	WHT			S2-2	
C138		-5					S1-2	
C139		-8					S3-2	
C140		-9					S15-3	
C141		-10					S4-2	
C142		-11					S10-2	
C143		J8-13	33				S5-2	
C144		P12-135	32				TB2-60	
C145		-136					TB2-59	
C146	SEE NOTE 6	-137					TB2-58	SEE NOTE 6
C147		-138					TB2-57	
C148		-139					TB2-56	
C149		P12-140	32				TB2-55	
C150	SEE NOTE 5	J8-14	33				S12-2	SEE NOTE 5
C151		J8-15	33				S6-2	
C152		P12-141	32				TB2-54	
C153		-142					TB2-53	
C154	SEE NOTE 6	-143					TB2-52	SEE NOTE 6
C155		-144					TB2-51	
C156		-145					TB2-50	
C157		P12-146	32				TB2-49	
C158	SEE NOTE 5	J8-16	33				S7-2	SEE NOTE 5
C159		J8-17	33				S9-2	
C160		P12-147	32				TB2-48	
C161		-148					-47	
C162		-149					-46	
C163		-150					-45	
C164		-151					-44	
C165	SEE NOTE 6	-152					-43	SEE NOTE 6
C166		-153					-42	
C167		-154					-41	
C168		-155					-40	
C169		-156					-39	
C170		-157					-38	
C171		P12-158	32				TB2-37	
C172	SEE NOTE 5	J8-18	33				S11-2	SEE NOTE 5
C173		J8-19	33				S8-2	
C174		P12-159	32				TB2-36	SEE NOTE F
C175	SEE NOTE 6	P12-160	32				TB2-35	
C176		P12-161	32	WHT	26	AR	TB2-34	

LEAD ELECTRICAL

COND IDENT	REMARKS	FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
C177		P12-162	32	WHT	26	AR	TB2-33	
C178	SEE NOTE 6	P12-163	32				TB2-32	SEE NOTE 6
C179		P12-164	32				TB2-31	
C180	SEE NOTE 5	J8-20	33				S13-2	SEE NOTE 5
C181		J8-21	33				S1-3	
C182		P12-166	32				TB2-30	
C183		-166					-29	
C184	SEE NOTE 6	-167					-28	SEE NOTE 6
C185		-168					-27	
C186		-169					-26	
C187		P12-170	32				TB2-25	
C188	SEE NOTE 5	J8-22	33				S14-2	SEE NOTE 5
C189		P12-190	32				TB2-16	
C190		-174					-24	
C191	SEE NOTE 6	-175					-23	SEE NOTE 6
C192		P12-176	32				TB2-22	
C193	SEE NOTE 5	J8-24	33				S15-2	SEE NOTE 5
C194		J8-25	33				S18-1	
C195		P12-196	32				TB2-12	
C196	SEE NOTE 6	-192					-14	SEE NOTE 6
C197		-204					-7	
C198		P12-182	32				TB2-20	
C199	SEE NOTE 5	J8-26	33				S16-2	SEE NOTE 5
C200		J8-27	33				S17-2	
C201		P12-185	32				TB2-19	
C202		-210					-1	
C203	SEE NOTE 6	-187					-17	SEE NOTE 6
C204		-195					-13	
C205		-181	32	WHT			TB2-21	
C206	SEE NOTE 8	-193	40	ORN			S6-5	
C207		P12-194	38	RED			S6-4	SEE NOTE 5
C208		J8-30	33	WHT			S18-2	
C209		P12-197	32	WHT			TB2-11	
C210		-209					-2	
C211		-191					-15	
C212	SEE NOTE 6	-201					-10	SEE NOTE 6
C213		-202					-9	
C214		-203					-8	
C215		-186					-18	
C216		-207					-6	
C217		-208	32	WHT			TB2-5	
C218		P12-179	33	WHT			S19-2	
C219		S1-1	35	YEL			S2-3	
C220		S2-1					S3-3	
C221		S3-1					S4-3	
C222		S4-1					S5-3	
C223		S6-1					S6-3	
C224		S6-1					S7-3	
C225		S7-1					S8-3	
C226		S8-1					S9-3	
C227		S9-1					S10-3	
C228		S10-1					S11-3	
C229		S11-1					S12-3	
C230		S12-1					S13-3	
C231		S13-1					S14-3	
C232		S14-1					S15-3	
C233		S15-1	35	YEL			S16-3	
C234	SEE NOTE 5	S17-4	38	RED			S5-4	
C235		S17-5	40	ORN			S5-5	
C236		S6-4	38	RED			S2-4	
C237		S6-5	40	ORN			S2-5	
C238		S4-4	38	RED			S7-4	
C239		S4-5	40	ORN			S7-5	SEE NOTE 5
C240		S7-4	38	RED			S3-4	
C241		S7-5	40	ORN			S3-5	
C242		S3-4	38	RED			S8-4	
C243		S3-5	40	ORN			S8-5	
C244		S8-4	38	RED			S9-4	
C245		S8-5	40	ORN			S9-5	
C246		S9-4	38	RED			S12-4	
C247		S9-5	40	ORN			S12-5	
C248		S12-4	38	RED			S15-4	
C249		S12-5	40	ORN			S15-5	
C250		S15-4	38	RED			S16-4	
C251		S15-5	40	ORN			S16-5	
C252		S16-4	38	RED			S13-4	
C253		S16-5	40	ORN			S13-5	
C254		S13-4	38	RED			S10-4	
C255		S13-5	40	ORN			S10-5	
C256		S10-4	38	RED			S11-4	
C257		S10-5	40	ORN			S11-5	
C258		S11-4	38	RED			S14-4	
C259		S11-5	40	ORN			S14-5	
C260		S14-4	38	RED			S17-4	
C261		S14-5	40	ORN			S17-5	
C262		S17-1	35	YEL			S18-3	
C263	SEE NOTE 6	P12-184	32	WHT			G2	SEE NOTE 6
C264	SEE NOTE 6	P12-183	41				G3	SEE NOTE 5
C265		P12-20	32				TB1-67	
C266	SEE NOTE 6	P12-8					TB1-82	SEE NOTE 6
C267		P12-173					TB2-4	
C268		P12-177					TB2-3	
C269		P12-19	32	WHT	26	AR	TB1-66	

MASTER

QTY REQD	PART OR IDENTIFYING NO.	MATERIAL OR NOTES	NOMENCLATURE OR DESCRIPTION	FIND NO
LIST OF MATERIALS				

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
FRACTION VALUES ARE IN ±
RESISTOR VALUES ARE IN OHMS
TOLERANCES ON
3 PLACE DECIMALS ANGLES
± ± °
DO NOT SCALE THIS DRAWING
MATERIAL
NEXT ASSY | USED ON
APPLICATION

MIT INSTRUMENTATION LAB

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

DRAWN J.F. Long
CHECKED
APPROVED
APPROVED
APPROVED MIT
APPROVED MSC

FRONT HOUSING ASSEMBLY
AGC DSKY

CODE IDENT NO. 80230 | SIZE J | DRAWING NO. 2003949
DATE | SCALE NONE | SHEET 3 OF 3

2003949 D

F 2 / 2

LEAD ELECTRICAL

COND IDENT	REMARKS	FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
C1		P12-131	32	WHT	26	AR	TB2-64	
C2		-132					TB2-63	
C3		-133					TB2-62	
C4		-134					TB2-61	
C5		-127					TB2-68	
C6		-128					TB2-67	
C7		-129					TB2-66	
C8		-130					TB2-65	
C9		-123					TB2-72	
C10		-124					TB2-71	
C11		-125					TB2-70	
C12		-126					TB2-69	
C13		-119					TB2-76	
C14		-120					TB2-75	
C15		-121					TB2-74	
C16		-122					TB2-73	
C17		-115					TB2-80	
C18		-116					TB2-79	
C19		-117					TB2-78	
C20		-118					TB2-77	
C21		-111					TB2-84	
C22		-112					TB2-83	
C23		-113					TB2-82	
C24		-114					TB2-81	
C25		-107					TB2-88	
C26		-108					TB2-87	
C27		-109					TB2-86	
C28		-110					TB2-85	
C29		-103					TB2-92	
C30		-104					TB2-91	
C31		-105					TB2-90	
C32		-106					TB2-89	
C33		-99					TB2-96	
C34		-100					TB2-95	
C35		-101					TB2-94	
C36		-102					TB2-93	
C37		-95					TB2-100	
C38		-96					TB2-99	
C39		-97					TB2-98	
C40		-98					TB2-97	
C41		-91					TBI-1	
C42		-92					TB2-103	
C43		-93					TB2-102	
C44	SEE NOTE 6	-94					TB2-101	SEE NOTE 6
C45		-87					TBI-5	
C46		-88					TBI-4	
C47		-89					TBI-3	
C48		-90					TBI-2	
C49		-83					TBI-9	
C50		-84					TBI-8	
C51		-85					TBI-7	
C52		-86					TBI-6	
C53		-79					TBI-13	
C54		-80					TBI-12	
C55		-81					TBI-11	
C56		-82					TBI-10	
C57		-73					TBI-19	
C58		-74					TBI-18	
C59		-75					TBI-17	
C60		-76					TBI-16	
C61		-77					TBI-15	
C62		-78					TBI-14	
C63		-67					TBI-25	
C64		-68					TBI-24	
C65		-69					TBI-23	
C66		-70					TBI-22	
C67		-71					TBI-21	
C68		-72					TBI-20	
C69		-61					TBI-31	
C70		-62					TBI-30	
C71		-63					TBI-29	
C72		-64					TBI-28	
C73		-65					TBI-27	
C74		-66					TBI-26	
C75		-55					TBI-37	
C76		-56					TBI-36	
C77		-57					TBI-35	
C78		-58					TBI-34	
C79		-59					TBI-33	
C80		-60					TBI-32	
C81		-50					TBI-42	
C82		-51					TBI-41	
C83		-52					TBI-40	
C84		-53					TBI-39	
C85		-54					TBI-38	
C86		-43					TBI-48	
C87		-44					TBI-47	
C88		P12-45	32	WHT	26	AR	TBI-46	

LEAD ELECTRICAL

COND IDENT	REMARKS	FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
C89		P12-46	32	WHT	26	AR	TBI-45	
C90		-47					TBI-44	
C91		-48					TBI-43	
C92		-37					TBI-54	
C93		-38					TBI-53	
C94		-39					TBI-52	
C95		-40					TBI-51	
C96		-41					TBI-50	
C97		-42					TBI-49	
C98		-31					TBI-60	
C99		-32					TBI-59	
C100		-33					TBI-58	
C101		-34					TBI-57	
C102		-35					TBI-56	
C103		-36					TBI-57	
C104		-25					TBI-65	
C105		-27					TBI-64	
C106	SEE NOTE 6	-28					TBI-63	SEE NOTE 6
C107		-29					TBI-62	
C108		-30					TBI-61	
C109		-21					TBI-71	
C110		-22					TBI-70	
C111		-23					TBI-69	
C112		-24					TBI-68	
C113		-13					TBI-76	
C114		-15					TBI-75	
C115		-16					TBI-74	
C116		-17					TBI-73	
C117		-18					TBI-72	
C118		-7					TBI-81	
C119		9					TBI-80	
C120		-10					TBI-79	
C121		-11					TBI-78	
C122		-12					TBI-77	
C123		-1					TBI-87	
C124		-3					TBI-86	
C125		-4					TBI-85	
C126		-5					TBI-84	
C127		P12-6	32	WHT			TBI-83	
C128		S16-1	35	YEL			S17-3	
C129		S5-4	38	RED			S19-4	
C130		S5-5	40	ORN			S19-5	
C131		S19-4	38	RED			S1-4	
C132		S19-5	40	ORN			S1-5	
C133		S1-4	38	RED			S18-4	
C134		S1-5	40	ORN			S18-5	
C135	SEE NOTE 5	S18-4	38	RED			S4-4	SEE NOTE 5
C136		S18-5	40	ORN			S4-5	
C137		J8-3	33	WHT			S2-2	
C138		-5					S1-2	
C139		-8					S3-2	
C140		-9					S19-3	
C141		-10					S4-2	
C142		-11					S10-2	
C143		J8-13	33				S5-2	
C144		P12-135	32				TB2-60	
C145		-136					TB2-59	
C146	SEE NOTE 6	-137					TB2-58	SEE NOTE 6
C147		-138					TB2-57	
C148		-139					TB2-56	
C149		P12-140	32				TB2-55	
C150	SEE NOTE 5	J8-14	33				S12-2	SEE NOTE 5
C151		J8-15	33				S6-2	
C152		P12-141	32				TB2-54	
C153		-142					TB2-53	
C154	SEE NOTE 6	-143					TB2-52	SEE NOTE 6
C155		-144					TB2-51	
C156		-145					TB2-50	
C157		P12-146	32				TB2-49	
C158	SEE NOTE 5	J8-16	33				S7-2	SEE NOTE 5
C159		J8-17	33				S9-2	
C160		P12-147	32				TB2-48	
C161		-148					-47	
C162		-149					-46	
C163		-150					-45	
C164	SEE NOTE 6	-151					-44	SEE NOTE 6
C165		-152					-43	
C166		-153					-42	
C167		-154					-41	
C168		-155					-40	
C169		-156					-39	
C170		-157					-38	
C171		P12-158	32				TB2-37	
C172	SEE NOTE 5	J8-18	33				S11-2	SEE NOTE 5
C173		J8-19	33				S8-2	
C174		P12-159	32				TB2-36	SEE NOTE 6
C175	SEE NOTE 6	P12-160	32				TB2-35	
C176		P12-161	32	WHT	26	AR	TB2-34	

LEAD ELECTRICAL

COND IDENT	REMARKS	FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
C177		P12-162	32	WHT	26	AR	TB2-33	
C178	SEE NOTE 6	P12-163	32				TB2-32	SEE NOTE 6
C179		P12-164	32				TB2-31	
C180	SEE NOTE 5	J8-20	33				S13-2	SEE NOTE 5
C181		J8-21	33				S13-3	
C182		P12-165	32				TB2-30	
C183		-166					-29	
C184	SEE NOTE 6	-167					-28	SEE NOTE 6
C185		-168					-27	
C186		-169					-26	
C187		P12-170	32				TB2-25	
C188	SEE NOTE 5	J8-22	33				S14-2	SEE NOTE 5
C189		P12-190	32				TB2-16	
C190		-174					-24	
C191	SEE NOTE 6	-175					-23	SEE NOTE 6
C192		P12-176	32				TB2-22	
C193	SEE NOTE 5	J8-24	33				S15-2	SEE NOTE 5
C194		J8-25	33				S18-1	
C195		P12-196	32				TB2-12	
C196	SEE NOTE 6	-192					-14	SEE NOTE 6
C197		-204					-7	
C198		P12-182	32				TB2-20	
C199	SEE NOTE 5	J8-26	33				S16-2	SEE NOTE 5
C200		J8-27	33				S17-2	
C201		P12-185	32				TB2-19	
C202		-210					-1	
C203	SEE NOTE 6	-187					-17	SEE NOTE 6
C204		-195					-13	
C205		-181	32	WHT			TB2-21	
C206	SEE NOTE 6	-193	40	ORN			S6-5	
C207		P12-194	38	RED			S6-4	SEE NOTE 5
C208		J8-30	33	WHT			S18-2	
C209		P12-197	32	WHT			TB2-11	
C210		-209					-2	
C211		-191					-15	
C212		-201					-10	
C213	SEE NOTE 6	-202					-9	SEE NOTE 6
C214		-203					-8	
C215		-186					-18	
C216		-207					-6	
C217		-208	32	WHT			TB2-5	
C218		P12-179	33	WHT			S19-2	
C219		S1-1	35	YEL			S2-3	
C220		S2-1					S3-3	
C221		S3-1					S4-3	
C222		S4-1					S5-3	
C223		S5-1					S6-3	
C224		S6-1					S7-3	
C225		S7-1					S8-3	
C226		S8-1					S9-3	
C227		S9-1					S10-3	
C228		S10-1					S11-3	
C229		S11-1					S12-3	
C230		S12-1					S13-3	
C231		S13-1					S14-3	
C232		S14-1					S15-3	
C233		S15-1	35	YEL			S16-3	
C234	SEE NOTE 5	S17-4	38	RED			S5-4	
C235		S17-5	40	ORN			S5-5	
C236		S6-4	38	RED			S2-4	
C237		S6-5	40	ORN			S2-5	
C238		S2-4	38	RED			S7-4	
C239		S2-5	40	ORN			S7-5	SEE NOTE 5
C240		S7-4	38	RED			S3-4	
C241		S7-5	40	ORN			S3-5	
C242		S3-4	38	RED			S8-4	
C243		S3-5	40	ORN			S8-5	
C244		S8-4	38	RED			S9-4	
C245		S8-5	40	ORN			S9-5	
C246		S9-4	38	RED			S12-4	
C247		S9-5	40	ORN			S12-5	
C248		S12-4	38	RED			S15-4	
C249		S12-5	40	ORN			S15-5	
C250		S15-4	38	RED			S16-4	
C251		S15-5	40	ORN			S16-5	
C252		S16-4	38	RED			S13-4	
C253		S16-5	40	ORN			S13-5	
C254		S13-4	38	RED			S10-4	
C255		S13-5	40	ORN			S10-5	
C256		S10-4	38	RED			S11-4	
C257		S10-5	40	ORN			S11-5	
C258		S11-4	38	RED			S14-4	
C259		S11-5	40	ORN			S14-5	
C260		S14-4	38	RED			S17-4	
C261		S14-5	40	ORN			S17-5	
C262		S17-1	35	YEL			S18-3	
C263	SEE NOTE 6	P12-184	32	WHT			62	SEE NOTE 6
C264	SEE NOTE 6	P12-183	41				63	SEE NOTE 5
C265		P12-20	32				TBI-67	
C266	SEE NOTE 6	P12-8					TBI-82	SEE NOTE 6
C267		P12-173					TB2-4	
C268		P12-177					TB2-3	
C269		P12-19	32	WHT	26	AR	TBI-66	

F 1 / 2

SH 3 / 8

LEAD ELECTRICAL

COND IDENT	REMARKS	FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
C1		P12-131	32	WHT	26	AR	TB2-64	
C2		-132					TB2-63	
C3		-133					TB2-62	
C4		-134					TB2-61	
C5		-135					TB2-60	
C6		-128					TB2-67	
C7		-129					TB2-66	
C8		-130					TB2-65	
C9		-123					TB2-72	
C10		-124					TB2-71	
C11		-125					TB2-70	
C12		-126					TB2-69	
C13		-119					TB2-76	
C14		-120					TB2-75	
C15		-121					TB2-74	
C16		-122					TB2-73	
C17		-115					TB2-80	
C18		-116					TB2-79	
C19		-117					TB2-78	
C20		-118					TB2-77	
C21		-111					TB2-84	
C22		-112					TB2-83	
C23		-113					TB2-82	
C24		-114					TB2-81	
C25		-107					TB1-88	
C26		-108					TB2-87	
C27		-109					TB2-86	
C28		-110					TB2-85	
C29		-103					TB2-92	
C30		-104					TB2-91	
C31		-105					TB2-90	
C32		-106					TB2-89	
C33		-99					TB2-96	
C34		-100					TB2-95	
C35		-101					TB2-94	
C36		-102					TB2-93	
C37		-95					TB2-100	
C38		-96					TB2-99	
C39		-97					TB2-98	
C40		-98					TB2-97	
C41		-91					TB1-1	
C42		-92					TB2-103	
C43		-93					TB2-102	
C44	SEE NOTE 6	-94					TB2-101	SEE NOTE 6
C45		-87					TB1-5	
C46		-88					TB1-4	
C47		-89					TB1-3	
C48		-90					TB1-2	
C49		-83					TB1-9	
C50		-84					TB1-8	
C51		-85					TB1-7	
C52		-86					TB1-6	
C53		-79					TB1-13	
C54		-80					TB1-12	
C55		-81					TB1-11	
C56		-82					TB1-10	
C57		-73					TB1-19	
C58		-74					TB1-18	
C59		-75					TB1-17	
C60		-76					TB1-16	
C61		-77					TB1-15	
C62		-78					TB1-14	
C63		-67					TB1-25	
C64		-68					TB1-24	
C65		-69					TB1-23	
C66		-70					TB1-22	
C67		-71					TB1-21	
C68		-72					TB1-20	
C69		-61					TB1-31	
C70		-62					TB1-30	
C71		-63					TB1-29	
C72		-64					TB1-28	
C73		-65					TB1-27	
C74		-66					TB1-26	
C75		-55					TB1-37	
C76		-56					TB1-36	
C77		-57					TB1-35	
C78		-58					TB1-34	
C79		-59					TB1-33	
C80		-60					TB1-32	
C81		-50					TB1-42	
C82		-51					TB1-41	
C83		-52					TB1-40	
C84		-53					TB1-39	
C85		-54					TB1-38	
C86		-43					TB1-48	
C87		-44					TB1-47	
C88		P12-45	32	WHT	26	AR	TB1-46	

LEAD ELECTRICAL

COND IDENT	REMARKS	FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
C89		P12-46	32	WHT	26	AR	TB1-45	
C90		-47					TB1-44	
C91		-48					TB1-43	
C92		-37					TB1-54	
C93		-38					TB1-53	
C94		-39					TB1-52	
C95		-40					TB1-51	
C96		-41					TB1-50	
C97		-42					TB1-49	
C98		-31					TB1-60	
C99		-32					TB1-59	
C100		-33					TB1-58	
C101		-34					TB1-57	
C102		-35					TB1-56	
C103		-36					TB1-55	
C104		-25					TB1-64	
C105		-27					TB1-63	
C106	SEE NOTE 6	-28					TB1-62	SEE NOTE 6
C107		-29					TB1-61	
C108		-30					TB1-71	
C109		-21					TB1-70	
C110		-22					TB1-69	
C111		-23					TB1-68	
C112		-24					TB1-76	
C113		-13					TB1-75	
C114		-15					TB1-74	
C115		-16					TB1-73	
C116		-17					TB1-72	
C117		-18					TB1-81	
C118		-7					TB1-80	
C119		-9					TB1-79	
C120		-10					TB1-78	
C121		-11					TB1-77	
C122		-12					TB1-87	
C123		-1					TB1-86	
C124		-3					TB1-85	
C125		-4					TB1-84	
C126		-5					TB1-83	
C127		P12-6	32	WHT			S17-3	
C128		S16-1	35	YEL			S19-4	
C129		S5-4	38	RED			S19-5	
C130		S5-5	40	ORN			S1-4	
C131		S19-4	38	RED			S1-5	
C132		S19-5	40	ORN			S18-4	
C133		S1-4	38	RED			S18-5	
C134		S1-5	40	ORN			S4-4	
C135	SEE NOTE 5	S18-4	38	RED			S4-5	SEE NOTE 5
C136		S18-5	40	ORN			S2-2	
C137		J8-3	33	WHT			S1-2	
C138		-5					S3-2	
C139		-8					S19-3	
C140		-9					S4-2	
C141		-10					S10-2	
C142		-11					S5-2	
C143		J8-13	33				TB2-60	
C144		P12-135	32				TB2-59	
C145		-136					TB2-58	
C146	SEE NOTE 6	-137					TB2-57	SEE NOTE 6
C147		-138					TB2-56	
C148		-139					TB2-55	
C149		P12-140	32				S12-2	
C150	SEE NOTE 5	J8-14	33				S6-2	SEE NOTE 5
C151		J8-15	33				TB2-54	
C152		P12-141	32				TB2-53	
C153		-142					TB2-52	
C154	SEE NOTE 6	-143					TB2-51	SEE NOTE 6
C155		-144					TB2-50	
C156		-145					TB2-49	
C157		P12-146	32				S7-2	
C158	SEE NOTE 5	J8-16	33				S9-2	SEE NOTE 5
C159		J8-17	33				TB2-48	
C160		P12-147	32				-47	
C161		-148					-46	
C162		-149					-45	
C163		-150					-44	
C164		-151					-43	
C165	SEE NOTE 6	-152					-42	SEE NOTE 6
C166		-153					-41	
C167		-154					-40	
C168		-155					-39	
C169		-156					-38	
C170		-157					TB2-37	
C171		P12-158	32				S11-2	
C172	SEE NOTE 5	J8-18	33				S8-2	SEE NOTE 5
C173		J8-19	33				TB2-36	
C174		P12-159	32				TB2-35	
C175	SEE NOTE 6	P12-160	32				TB2-34	SEE NOTE 6
C176		P12-161	32	WHT	26	AR		

LEAD ELECTRICAL

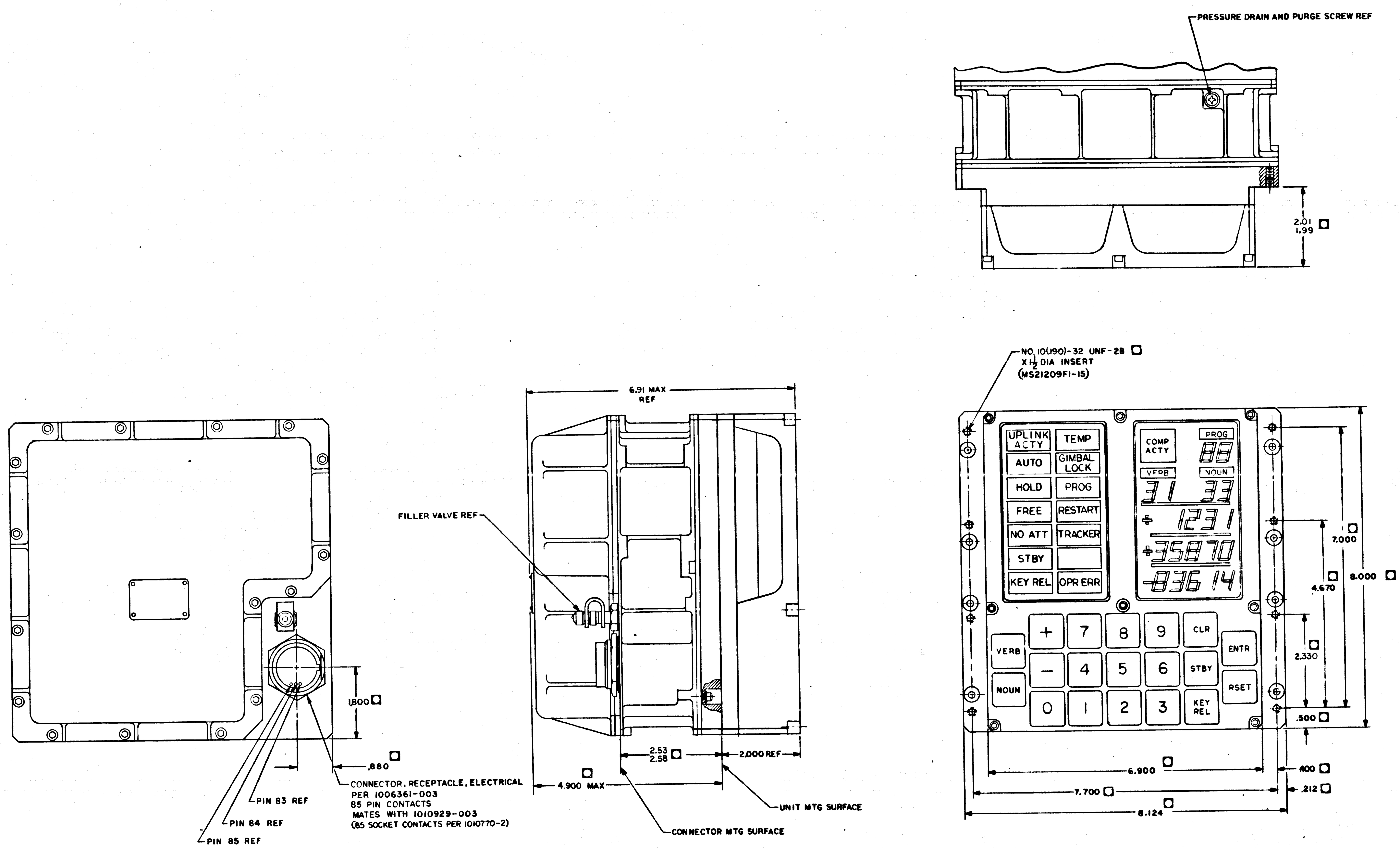
COND IDENT	REMARKS	FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
C177		P12-162	32	WHT	26	AR	TB2-33	
C178	SEE NOTE 6	P12-163	32				TB2-32	SEE NOTE 6
C179		P12-164	32				TB2-31	
C180	SEE NOTE 5	J8-20	33				S16-2	SEE NOTE 5
C181		J8-21	33				S1-3	
C182		P12-165	32				TB2-30	
C183		-166					-29	
C184	SEE NOTE 6	-167					-28	SEE NOTE 6
C185		-168					-27	
C186		-169					-26	
C187		P12-170	32				TB2-25	
C188	SEE NOTE 5	J8-22	33				S14-2	SEE NOTE 5
C189		P12-190	32				TB2-16	
C190		-174					-24	
C191	SEE NOTE 6	-175					-23	SEE NOTE 6
C192		P12-176	32				TB2-22	
C193	SEE NOTE 5	J8-24	33				S15-2	SEE NOTE 5
C194		J8-25	33				S18-1	
C195		P12-196	32				TB2-12	
C196	SEE NOTE 6	-192					-14	SEE NOTE 6
C197		-204					-7	
C198		P12-182	32				TB2-20	
C199	SEE NOTE 5	J8-26	33				S16-2	SEE NOTE 5
C200		J8-27	33				S17-2	
C201		P12-185	32				TB2-19	
C202		-210					-1	
C203	SEE NOTE 6	-187					-17	SEE NOTE 6
C204		-195					-13	
C205		-181	32	WHT			TB2-21	
C206	SEE NOTE 5	-193	40	ORN			S6-5	
C207		P12-194	38	RED			S6-4	SEE NOTE 5
C208		J8-30	33	WHT			S18-2	
C209		P12-197	32	WHT			TB2-11	
C210		-209					-2	
C211		-191					-15	
C212	SEE NOTE 6	-201					-10	
C213		-202					-9	SEE NOTE 6
C214		-203					-8	
C215		-186					-18	
C216		-207					-6	
C217		-208	32	WHT			TB2-5	
C218		P12-179	33	WHT			S10-2	
C219		S1-1	35	YEL			S2-3	
C220		S2-1					S1-3	
C221		S3-1					S4-3	
C222		S4-1					S5-3	
C223		S6-1					S6-3	
C224		S6-1					S7-3	
C225		S7-1					S8-3	
C226		S8-1					S9-3	
C227		S9-1					S10-3	
C228		S10-1					S11-3	
C229		S11-1					S12-3	
C230		S12-1					S13-3	
C231		S13-1					S14-3	
C232		S14-1					S15-3	
C233		S15-1	35	YEL			S16-3	
C234	SEE NOTE 5	S17-4	38	RED			S5-4	
C235		S17-5	40	ORN			S5-5	
C236		S6-4	38	RED			S2-4	
C237		S6-5	40	ORN			S2-5	
C238		S2-4	38	RED			S7-4	SEE NOTE 5
C239		S2-5	40	ORN			S7-5	
C240		S7-4	38	RED			S3-4	
C241		S7-5	40	ORN			S3-5	
C242		S3-4	38	RED			S8-4	
C243		S3-5	40	ORN			S8-5	
C244		S8-4	38	RED			S9-4	
C245		S8-5	40	ORN			S9-5	
C246		S9-4	38	RED			S12-4	
C247		S9-5	40	ORN			S12-5	
C248		S12-4	38	RED			S15-4	
C249		S12-5	40	ORN			S15-5	
C250		S15-4	38	RED			S6-4	
C251		S6-5	40	ORN			S6-5	
C252		S6-4	38	RED			S13-4	
C253		S6-5	40	ORN			S13-5	
C254		S13-4	38	RED			S10-4	
C255		S13-5	40	ORN			S10-5	
C256		S10-4	38	RED			S11-4	
C257		S10-5	40	ORN			S11-6	
C258		S11-4	38	RED			S14-4	
C259		S11-5	40	ORN			S14-5	
C260		S14-4	38	RED			S17-4	
C261		S14-5	40	ORN			S17-5	
C262		S17-1	35	YEL			S18-3	
C263	SEE NOTE 6	P12-184	32	WHT			62	SEE NOTE 6
C264	SEE NOTE 6	P12-183	41				63	SEE NOTE 5
C265		P12-20	32				TB1-67	
C266	SEE NOTE 6	P12-8					TB1-62	SEE NOTE 6
C267		P12-173					TB2-4	
C268		P12-177					TB2-3	
C269		P12-19	32	WHT	26	AR	TB1-66	

MASTER

2003956

SYM	DESCRIPTION	DATE	APPROVAL

REVISIONS



NOTES

1. ☐ DIMENSIONS CONTROLLED BY ICD MH01-01305-116
2. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
3. WEIGHT *Later*
4. ⊕ INDICATES CENTER OF GRAVITY *Locate Later*

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO

LIST OF MATERIALS

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS DECIMALS ±.005 ANGLES
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH

MIT INSTRUMENTATION LAB
CAMBRIDGE MASS

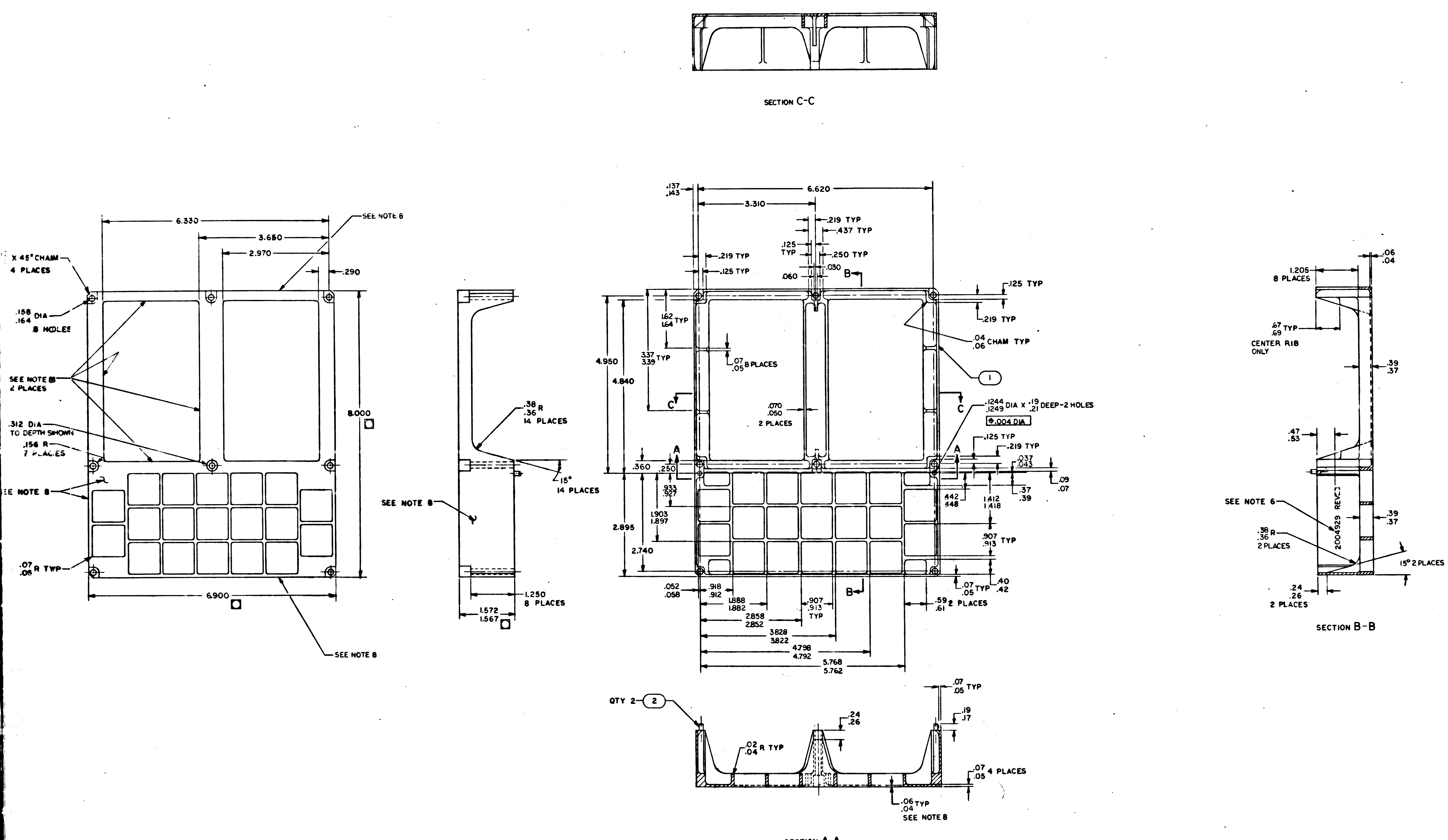
DRAWN *R.D. [illegible]* DATE
CHECKED *R. Edwards 13 July 65*
APPROVAL *[illegible]*
APPROVAL *[illegible] 17 July 65*
NASA APPROVAL *[illegible]*
MIT APPROVAL *[illegible] 20 July 65*

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

AGC DSKY
OUTLINE DRAWING

CODE IDENT NO 80230 | SIZE | NASA DRAWING NO 2003956
SCALE 1/1 | WT | SHEET 1 OF 1

2003956



NOTES
1. MATL:6061-T6-AL PER QQ-A-250/11,TEMP6
2. REMOVE BURRS AND SHARP EDGES.005/.015
3. ALL SURFACES 125/
4. CHROMATE PER MIL-C-5541,TYPE II,GRADE C,CLASS B
5. UNLESS OTHERWISE SPECIFIED ALL FILLETS AND RADII TO BE .09 R MAX
6. MARK .10/.14 HIGH BLACK CHARACTERS PER ND1002019 AND ND1002122,TYPE II,CLASS 2 USING INK 1006271-10
7. C DIMENSIONS CONTROLLED BY ICD MH01
8. C PAINT INDICATED SURFACES WITH 1010729-1 MED GRAY EPOXY ENAMEL PER ND1002110
9. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
2	MS16555-625	PIN, DOWEL	2
1	2004929-001	COVER, FRONT	1
011	LIST OF MATERIALS		

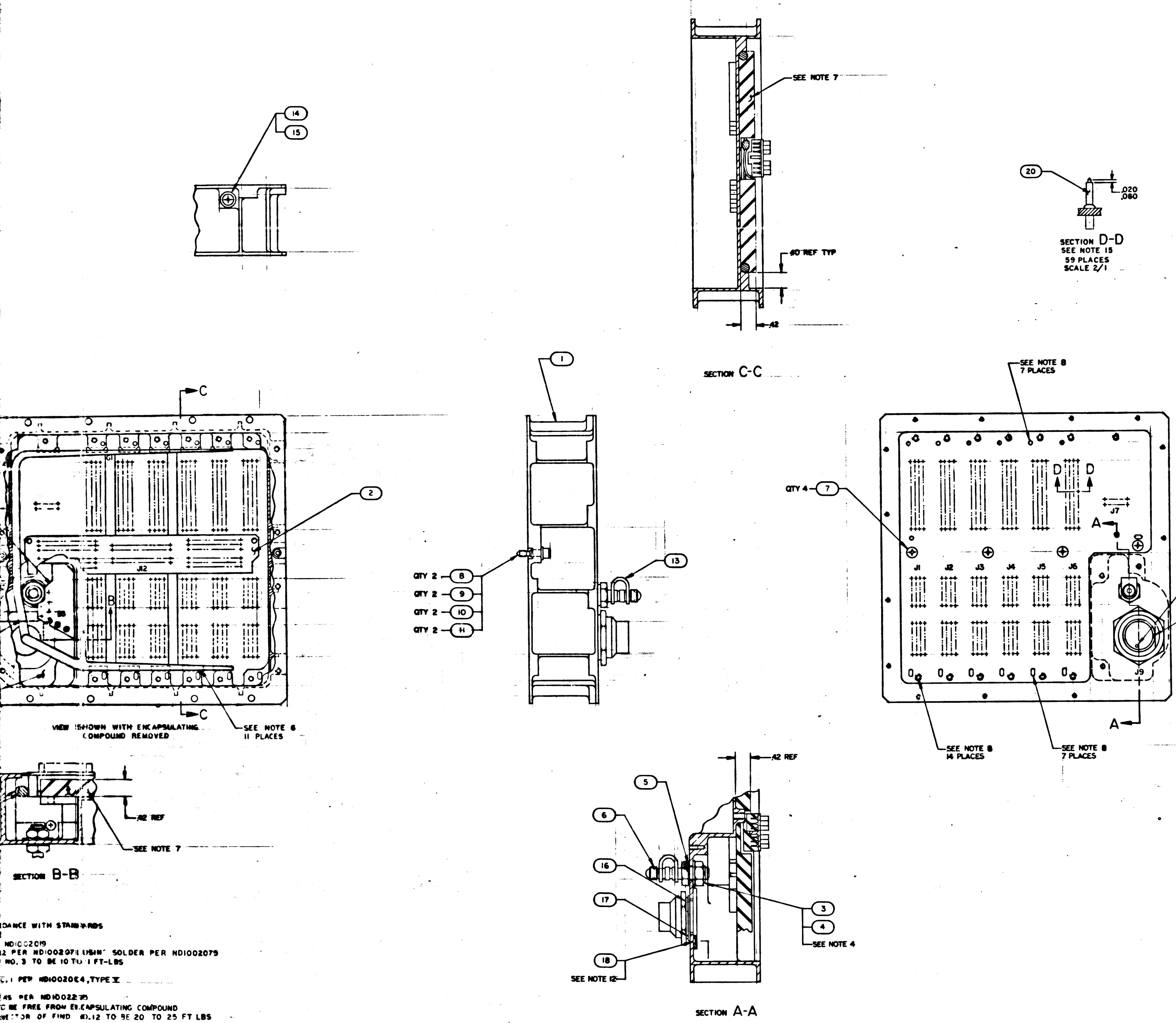
NEXT ASSY	2003900
USED ON	
APPLICATION	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	TOLERANCES ON FRACTIONS ± DECIMALS ±.005 ANGLES ±2°
	DO NOT SCALE THIS DRAWING
MATERIAL	SEE NOTE 1
HEAT TREATMENT	NONE
FINAL FINISH	SEE NOTES 4 & 8
MIT INSTRUMENTATION LAB, CAMBRIDGE MASS	
DRAWN	
CHECKED	
APPROVAL	
APPROVAL	
NASA APPROVAL	
MIT APPROVAL	
MIT APPROVAL	
MANNED SPACECRAFT CENTER, HOUSTON, TEXAS	
TITLE	COVER, FRONT AGC DSKY
CODE IDENT NO.	80230
SIZE	J
NASA DRAWING NO.	2004929
SCALE	1/1
WT	
SHEET	1 OF 1

2004929 -

MASTER

2H

SYM	DESCRIPTION	DATE	APPROVAL
A	INITIAL RELEASE		



...DANCE WITH STANDARDS
... ND1002019
...12 PER ND1002071 USING SOLDER PER ND1002079
... NO. 3 TO BE 10 TO 1 FT-LBS
...C.1 PER ND1002004, TYPE V
...EAS PER ND1002235
... BE FREE FROM ENCAPSULATING COMPOUND
...ECTOR OF FIND NO.12 TO BE 20 TO 25 FT LBS
... PER ND1002031 EXCEPT 1010807-22 TO HAVE
...ULATED WIRE, 1/2 TO 1-1/2 TURNS OF INSULATED
... LB, AND STRIP FORCE OF 5LBS MIN.
... AND ENCAPSULATING
...RFACE A
... AND REPLACE WITH FIND NO. 18
... PER ND1002004 TYPE V
... FIND NO. 3), EXCEPT PINS NO. 93 THRU 124

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
☒	2005954	INTERCONNECTING DIAGRAM	REF
AR	1006776-21	INSULATION SLEEVING	20
1	2003880-011	TERMINAL BLOCK ASSY	19
1	1000159-10	PACKING, PREFORMED O-RING	18
1	1004546-6	WASHER, FLAT	17
1	1010635-004	WASHER, LOCK	16
1	NAS1598D08N	WASHER, SEALING	15
1	MS51957-42	SCREW, PAN HD, CROSS RECESSED	14
1	2004931	RETAINER, VALVE CAP	13
1	2003886-011	WIRING HARNESS, BRANCHED	12
2	MS16633-4015	RING, RETAINING	11
2	1004546-3	WASHER, FLAT	10
2	1004546-1	WASHER, FLAT	9
2	1004579-2	SCREW, JACKING	8
4	MS51959-28	SCREW, FLAT HD, CROSS RECESSED	7
1	2004903	VALVE PNEUMATIC TANK	6
1	1000159-14	PACKING, PREFORMED, O-RING	5
1	MS15795-814	WASHER, FLAT	4
1	MS20364D624A	NUT, HEX	3
1	2003882-011	CONNECTOR PLATE WIRED ASSY	2
1	203947-011	IDM WIREWRAP PLATE ASSY	1

-011 LIST OF MATERIALS

2003885 A

NEXT ASSY	USED ON
2003994	

APPLICATION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± DECIMALS ±.01 ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH

MIT INSTRUMENTATION LAB
CAMBRIDGE MASS

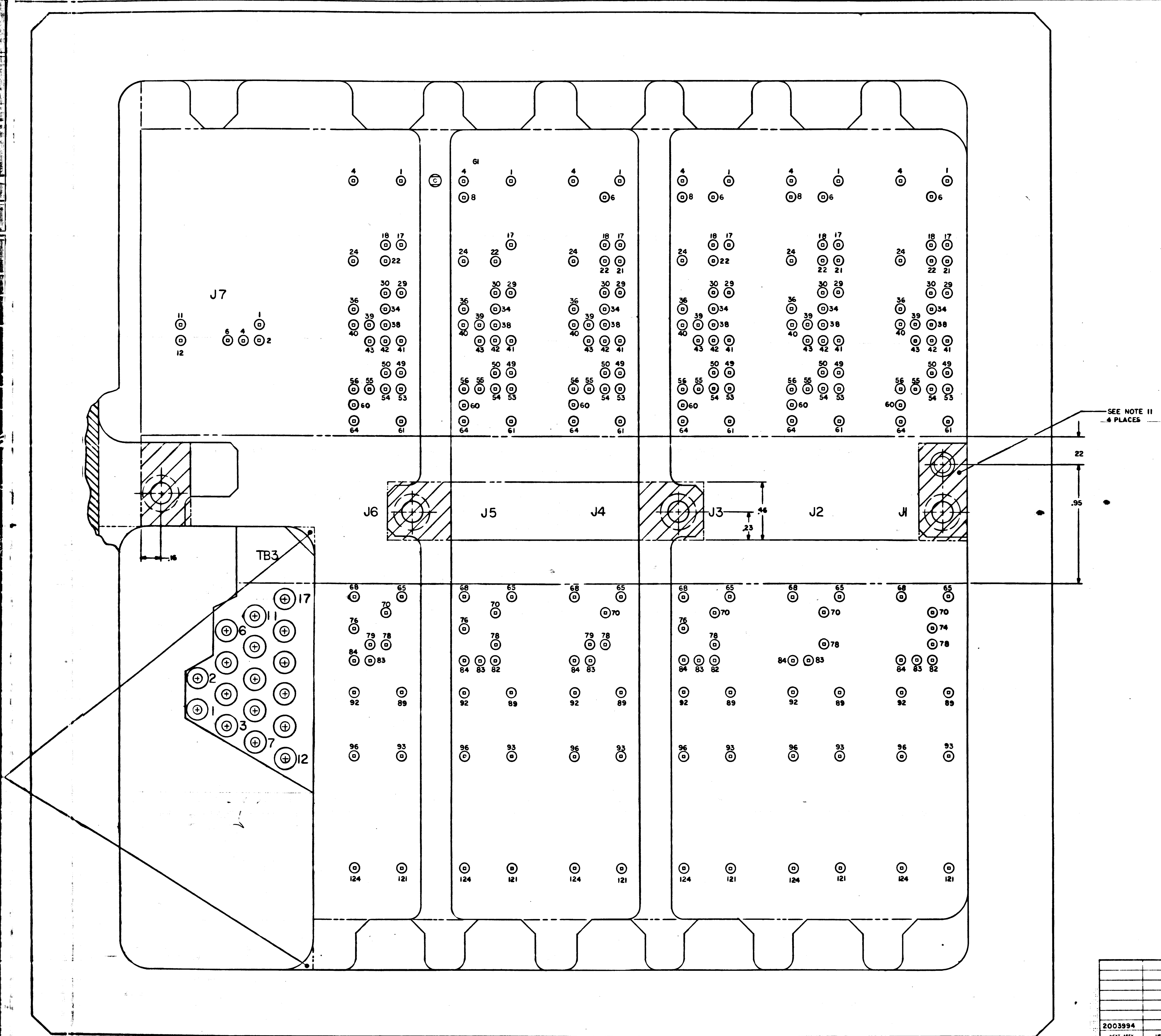
DRAWN [signature] DATE 21 SEP 66
CHECKED [signature] 22 SEP 66
APPROVAL
APPROVAL [signature]
NASA APPROVAL [signature]
CLO APPROVAL [signature]

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

MAIN HOUSING ASSEMBLY
AGC DSKY

CODE IDENT NO 80230 | SIZE J | NASA DRAWING NO 2003885
SCALE 1/1 | WT | SHEET 1 OF 3

2/2003885



2003885 A

SYM	DESCRIPTION	DATE	APPROVAL
A	INITIAL RELEASE TDM 32573		

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO

LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH

2003994 — NEXT ASSY — USED ON — APPLICATION

MIT INSTRUMENTATION LAB CAMBRIDGE MASS

DRAWN J. May DATE
CHECKED
APPROVAL
APPROVAL Eldon C. Hall
NASA APPROVAL
APPROVAL

MANNED SPACECRAFT CENTER
HOUSTON TEXAS

MAIN HOUSING ASSEMBLY
AGC DSKY

CODE IDENT NO 80230 SIZE J NASA DRAWING NO 2003885
SCALE NONE WT SHEET 2 OF 3

2003885 A

2/2003885

2003885 A

REVISIONS			
BY#	DESCRIPTION	DATE	APPROVAL
A	INITIAL RELEASE PCN# 31073	1/8/67	

LEAD ELECTRICAL

COND IDENT	REMARKS	FROM	SEE NOTE	COLOR	SIZE AWG	LENGTH	TO	REMARKS
A1		J12-166	16	OPT	30	AR	J7-6	
A2		-167	16	OPT	30		J6-43	
A3		-160	17	WHT	26		-18	
A4		-159	16	OPT	30		-34	
A5		-154					-40	
A6		-153					-50	
A7		-148	16	OPT	30		-39	
A8		-147	17	WHT	26		-38	
A9		-142	16	OPT	30		-54	
A10		-141					-41	
A11		-136					-29	
A12		-135					-55	
A13		-187					-42	
A14		-210	16	OPT	30		-49	
A15		-182	17	WHT	26		-60	
A16		-204	16	OPT	30		-56	
A17		-192					-17	
A18		-176					-36	
A19		-175					-22	
A20		-174					J6-30	
A21		-170					J7-4	
A22		-159					J6-24	
A23		-168					J6-53	
A24		-164					J6-43	
A25		-163					-34	
A26		-162					-36	
A27		-161					-22	
A28		-158					-56	
A29		-157					-39	
A30		-156	16	OPT	30		-24	
A31		-155	17	WHT	26		-8	
A32		-152	16	OPT	30		-42	
A33		-151					-40	
A34		-150	17	WHT	26		-38	
A35		-149	16	OPT	30		-30	
A36	SEE NOTE 10	-146					-50	SEE NOTE 10
A37		-145					-55	
A38		-144					-49	
A39		-143					-29	
A40		-140					-54	
A41		-139					-53	
A42		-138					-41	
A43		-137	16	OPT	30		-17	
A44		-134	17	WHT	26		J5-60	
A45		-133	16	OPT	30		J4-43	
A46		-132					J4-6	
A47		-131					J6-84	
A48		-130					J4-24	
A49		-129					J4-39	
A50		-128					J4-17	
A51		-127					J6-83	
A52		-126					J4-50	
A53		-125					J4-40	
A54		-124					J4-36	
A55		-123					J6-78	
A56		-122					J4-30	
A57		-121					J4-29	
A58		-120					J4-18	
A59		-119					J6-70	
A60		-118					J4-34	
A61		-117					J4-38	
A62		-116					J4-21	
A63		-115					J6-76	
A64		-114					J4-55	
A65		-113					-41	
A66		-112					-42	
A67		-111					-83	
A68		-110					-53	
A69		-109					-54	
A70		-108					-49	
A71		-107					-70	
A72		J12-106	16	OPT	30	AR	J4-60	

LEAD ELECTRICAL

COND IDENT	REMARKS	FROM	SEE NOTE	COLOR	SIZE AWG	LENGTH	TO	REMARKS
A73		J12-105	16	OPT	30	AR	J4-56	
A74		-104					J4-22	
A75		-103					J3-76	
A76		-102					-17	
A77		-101	16	OPT	30		-24	
A78		-100	17	WHT	26		-18	
A79		-99	16	OPT	30		-70	
A80		-98	16	OPT	30		-40	
A81		-97	16	OPT	30		-36	
A82		-96	17	WHT	26		J3-6	
A83		-95	16	OPT	30		J2-84	
A84		-94	16	OPT	30		J3-22	
A85		-93	16	OPT	30		J3-30	
A86		-92	17	WHT	26		J3-8	
A87		-91	16	OPT	30		J2-83	
A88		-90	16	OPT	30		J3-39	
A89		-89	16	OPT	30		J3-43	
A90		-88	17	WHT	26		J3-38	
A91		-87	16	OPT	30		J1-78	
A92		-86					J3-56	
A93		-85					J3-42	
A94		-84					J3-34	
A95		-83					J1-74	
A96		-82					J3-50	
A97		-81	16	OPT	30		J3-55	
A98		-80	17	WHT	26		J3-60	
A99		-79	16	OPT	30		J1-70	
A100		-78					J3-41	
A101		-77					J3-29	
A102		-76					J3-C4	
A103		-75					J3-49	
A104		-74					J6-79	
A105		-73					J5-76	
A106		-72					J3-53	
A107		-71	16	OPT	30		J3-C6	
A108	SEE NOTE 10	-70	17	WHT	26		J2-8	SEE NOTE 10
A109		-69	16	OPT	30		J2-18	
A110		-68					J5-70	
A111		-67					J5-84	
A112		-66					J2-56	
A113		-65					J2-24	
A114		-64	16	OPT	30		J2-36	
A115		-63	17	WHT	26		J2-6	
A116		-62	16	OPT	30		J5-83	
A117		-61					J5-78	
A118		-60					J2-21	
A119		-59					J2-30	
A120		-58					J2-40	
A121		-57					J2-34	
A122		-56					J5-82	
A123		-55					J4-79	
A124		-54					J2-50	
A125		-53					J2-39	
A126		-52					J2-43	
A127		-51					J2-22	
A128		-50					J4-78	
A129		-48					J2-55	
A130		-47					J2-42	
A131		-46					J2-38	
A132		-45					J2-29	
A133		-44					J3-84	
A134		-43					J3-83	
A135		-42					J2-54	
A136		-41					J2-49	
A137		-40					J2-41	
A138		-39					J2-17	
A139		-38					J3-78	
A140		-37					J3-82	
A141		-36					J2-53	
A142		-35					J1-24	
A143		-34	16	OPT	30		J1-17	
A144		J12-33	17	WHT	26	AR	J1-6	

LEAD ELECTRICAL

COND IDENT	REMARKS	FROM	SEE NOTE	COLOR	SIZE AWG	LENGTH	TO	REMARKS
A145		J12-32	16	OPT	30	AR	J2-78	
A146		-31					J2-70	
A147		-30					J1-53	
A148		-29					-36	
A149		-28					-21	
A150		-27					-22	
A151		-25					-84	
A152		-24					-29	
A153		-23					-39	
A154		-22					-34	
A155		-21					-30	
A156	SEE NOTE 10	-18					-55	SEE NOTE 10
A157		-17					-43	
A158		-16					-49	
A159		-15					J1-18	
A160		-13					J4-84	
A161		-12					J1-56	
A162		-11					-50	
A163		-10					-41	
A164		-9					-40	
A165		-7					-83	
A166		-6					-60	
A167		-5					-54	
A168		-4					-38	
A169		-3					-42	
A170		J12-1	16	OPT	30		J1-82	
A171		J12-183	17	WHT	26	AR	G1	SEE NOTE 13

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.

LIST OF MATERIALS

2003994			
NEXT ASSY	USED ON		
APPLICATION			

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH

CONTRACT NO.	
DRAWN	DATE 12/29/66
CHECKED	DATE 12/29/66
APPROVAL	
APPROVAL	
NASA APPROVAL	
APPROVAL	

MIT
INSTRUMENTATION LAB
Cambridge 39, Mass.

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

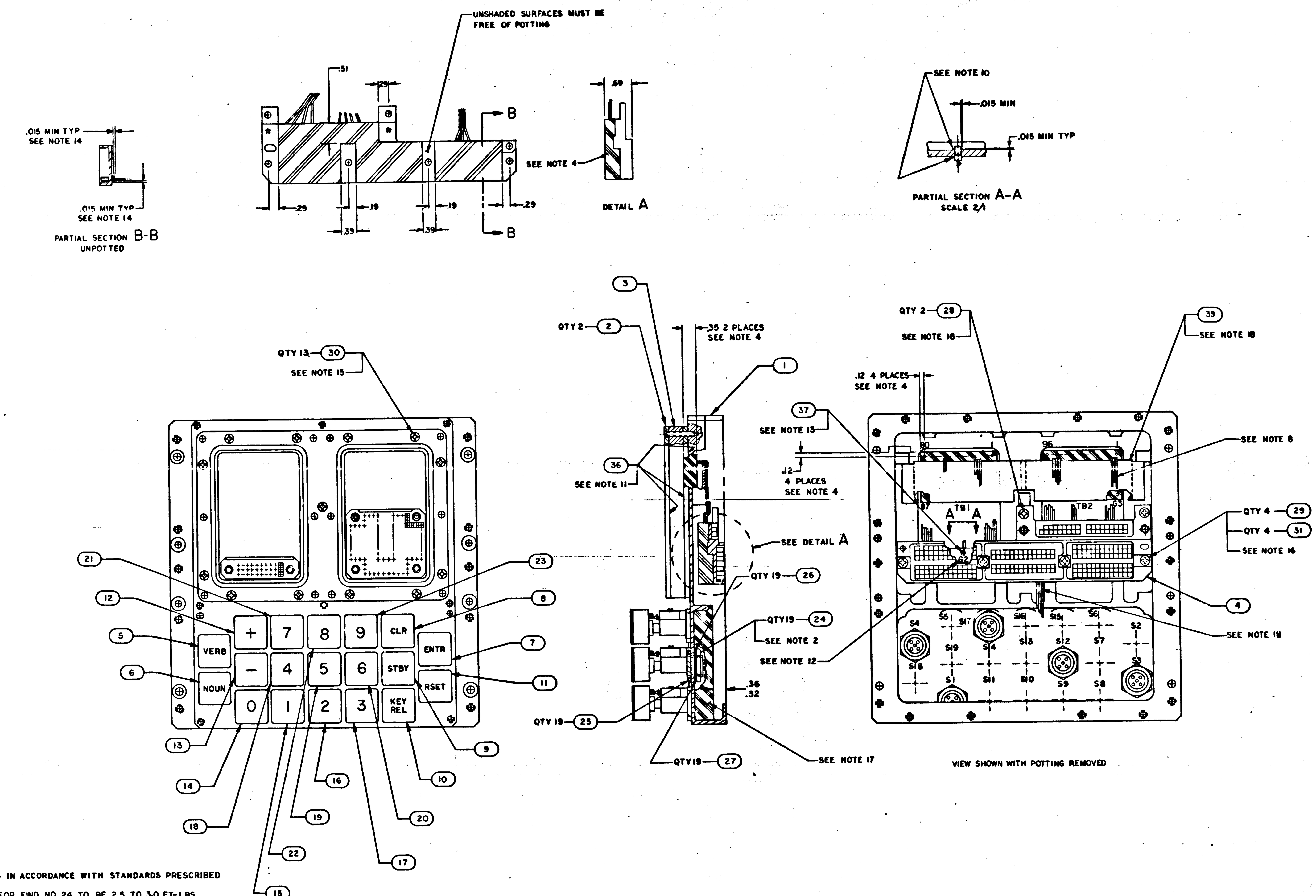
MAIN HOUSING ASSEMBLY
AGC DSKY

CODE IDENT NO	SIZE	NASA DRAWING NO
80230	J	2003885

SCALE NONE WT SHEET 3 OF 3

2003885 A

2003949 -



NOTES

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MOUNTING TORQUE FOR FIND NO. 24 TO BE 2.5 TO 3.0 FT-LBS
3. IDENTIFY WITH PART NO. PER ND1002019
4. ENCAPSULATE INDICATED AREAS PER ND1002236
5. SOLDER PER ND 1002071 USING SOLDER PER ND1002075
6. WELD PER ND1002005
7. AR DENOTES AS REQUIRED
8. BOND FIND NO. 32, 33, 38, 40 & 41 TO FIND NO. 39 PER ND1002004, TYPE IV
9. DRESS AND TRIM AT ASSEMBLY USING FIND NO. 34
10. SEAL FIND NO. 37 TO FIND NO. 1 PER ND1002004 TYPE VI
11. APPLY FIND NO. 36 TO INDICATED SURFACES OF FIND NO. 2. DO NOT APPLY TO BONDED RUBBER
12. MARK .07/.10 HIGH BLACK CHARACTERS PER ND1002019 AND ND1002122 TYPE II CLASS 2, USING MARKING INK 1006271-11
13. MOUNTING TORQUE FOR FIND NO. 37 TO BE 15–20 INCH OUNCES
14. SEAL INSULATORS ON FIND NO. 4 PER ND1002004 TYPE VI
15. MOUNTING TORQUE FOR FIND NO. 30 TO BE 3.5–4.5 INCH POUNDS
16. MOUNTING TORQUE FOR FIND NO. 28 AND FIND NO. 29 TO BE 8 TO 9 INCH POUNDS
17. ENCAPSULATE PER ND
18. BOND FIND NO. 39 & WIRES FROM S1 THRU S19 TO FIND NO. 1 PER ND1002004, TYPE IV

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION
X	2005953	INTERCONNECTING DIAGRAM
AR	1010807-22	WIRE INSULATED
AR	1010416-14	WIRE, INSULATED
1	2004898	SUPPORT, WIRE
AR	1010416-13	WIRE, INSULATED
1	2004039	TERMINAL, THREADED
AR	1006879	SILICONE COMPOUND
AR	1010416-15	WIRE, INSULATED
AR	1012507-003	TAPE, LACING
AR	1010416-20	WIRE, INSULATED
AR	1010848-1	WIRE, INSULATED
4	NAS620-6L	WASHER, FLAT
13	MS51959-20	SCREW, FLAT HD, CROSS RECESSED
4	MS51957-30	SCREW, PAN HD, CROSS RECESSED
2	MS51959-28	SCREW, FLAT HD, CROSS RECESSED
19	1010635-003	WASHER, LOCK
19	2004940	WASHER, PLAIN
19	1000159-7	O RING SEAL
19	2004942	NUT, HEX
1	2003984-211	SWITCH, ASSEMBLY PUSHBUTTON
1	-191	
1	-181	
1	-171	
1	-161	
1	-151	
1	-141	
1	-131	
1	-121	
1	-111	
1	-091	
1	-081	
1	-071	
1	-061	
1	-051	
1	-041	
1	-031	
1	-021	
1	2003984-011	SWITCH, ASSEMBLY PUSHBUTTON
1	2003948-011	CONNECTOR, PLATE ASSEMBLY
1	2003959-011	ADAPTER, PLATE ASSEMBLY
2	1006351	GASKET, PREFORMED
1	2004968-011	HOUSING, FRONT
011		LIST OF MATERIALS

2003950	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
CAPACITOR VALUES ARE IN µf
RESISTOR VALUES ARE IN OHMS
TOLERANCES ON
FRACTIONS ± DECIMALS ±.01 ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL

MIT INSTRUMENTATION LAB
CAMBRIDGE, MASS.

DRAWN: E. Forand 10FEB64
CHECKED: J.C. Darby 11FEB64
APPROVED: R. O'Donnell 3FEB64
APPROVED: Ellen C. Hall 11FEB64
APPROVED MIT
APPROVED MSC: A. C. METZGER

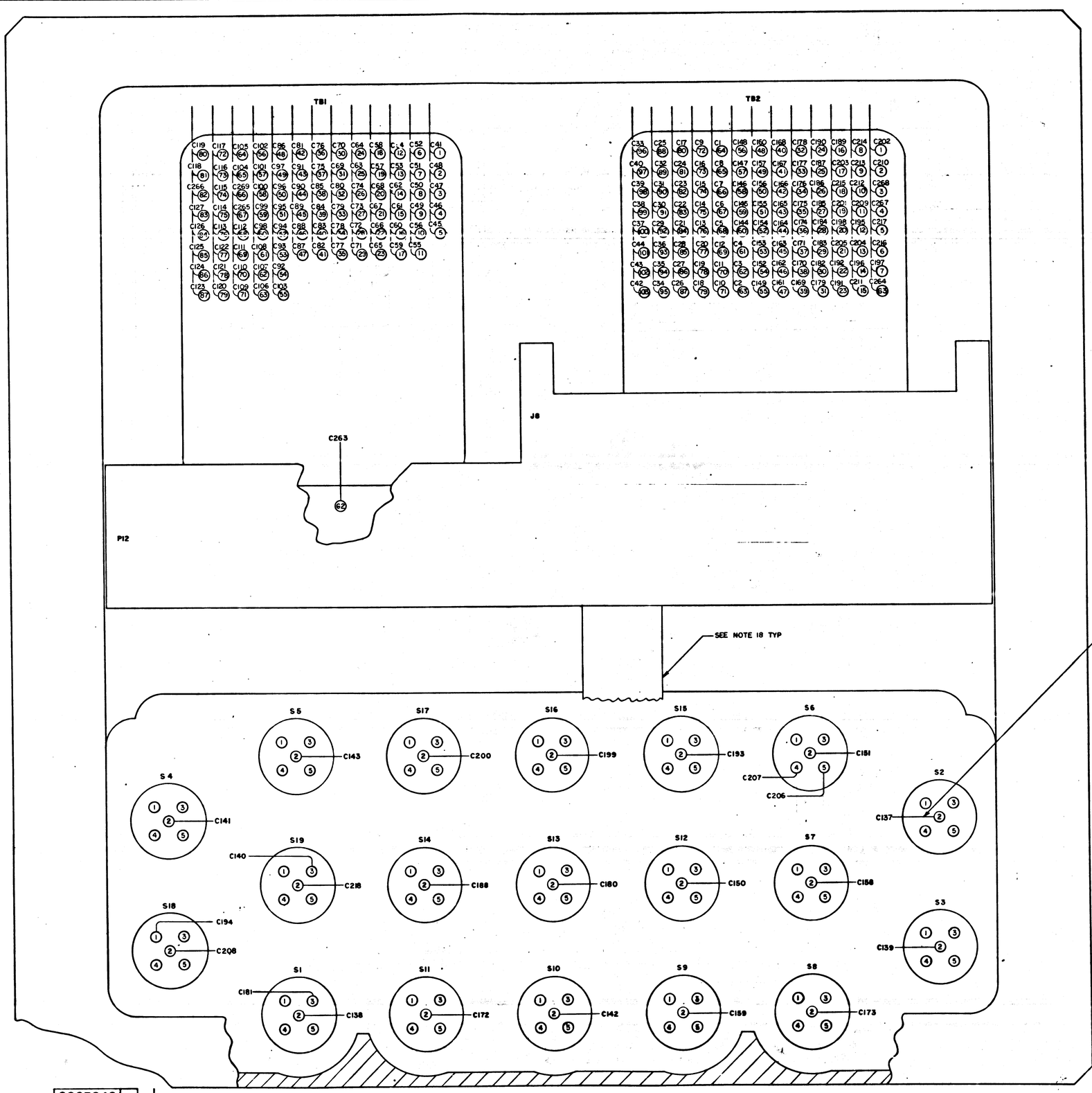
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

FRONT HOUSING ASSEMBLY
AGC DSKY

CODE IDENT NO. 80230 | SIZE J | DRAWING NO. 2003949
SCALE 1/1

MASTER

2003949 -



MASTER

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION
		SELV
		INSTRUMENTATION LAB

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
CAPACITOR VALUES ARE IN μF
RESISTOR VALUES ARE IN OHMS
TOLERANCES ON
FRACTIONS DECIMALS ANGLES
.xx ±.xx ±°
DO NOT SCALE THIS DRAWING

MATERIAL

NEXT ASSY | USED ON

APPLICATION

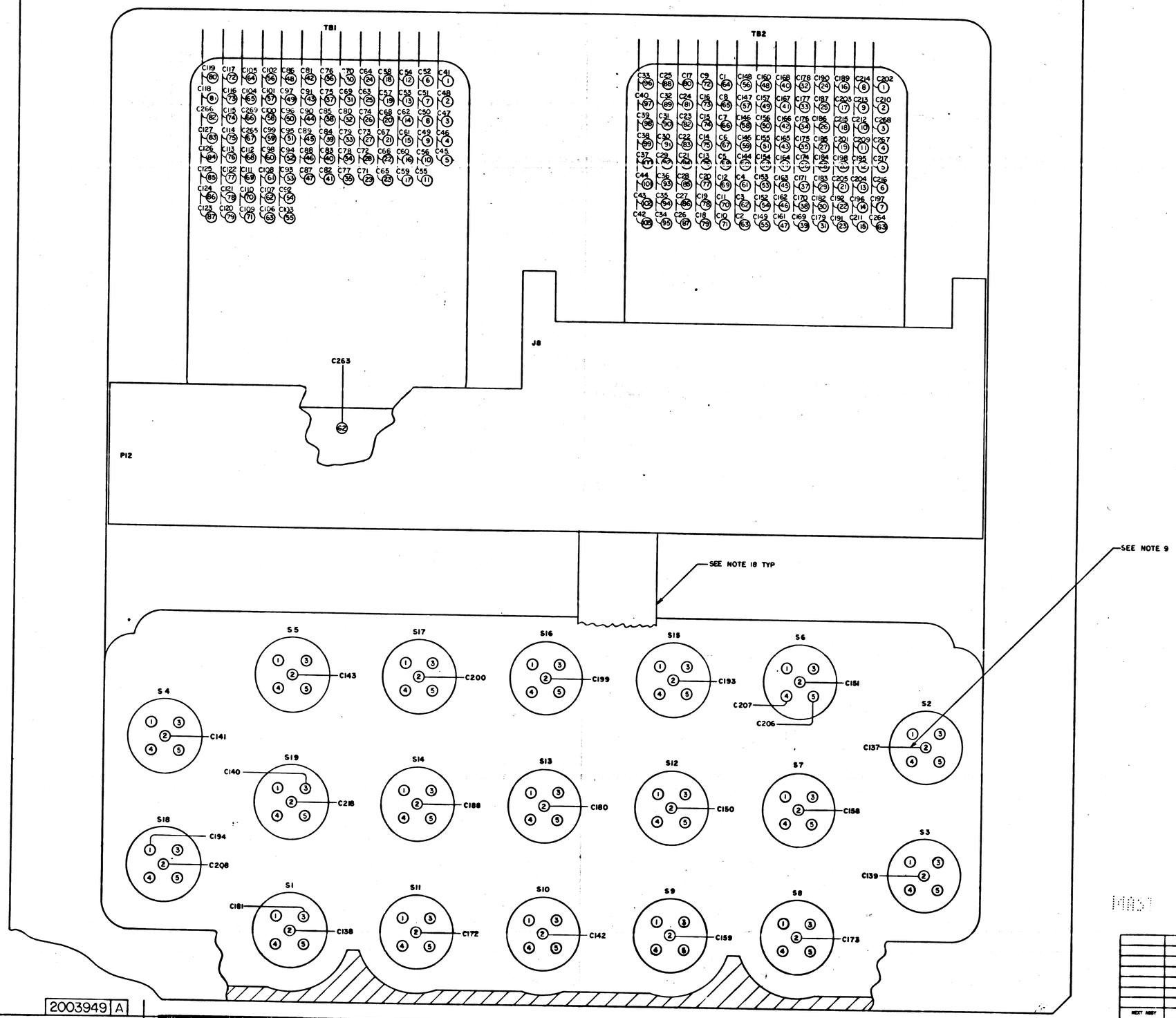
DRAWN
CHECKED
APPROVED
APPROVED

APPROVED
M.I.T.

APPROVED
MISC.

DATA

2003949 –

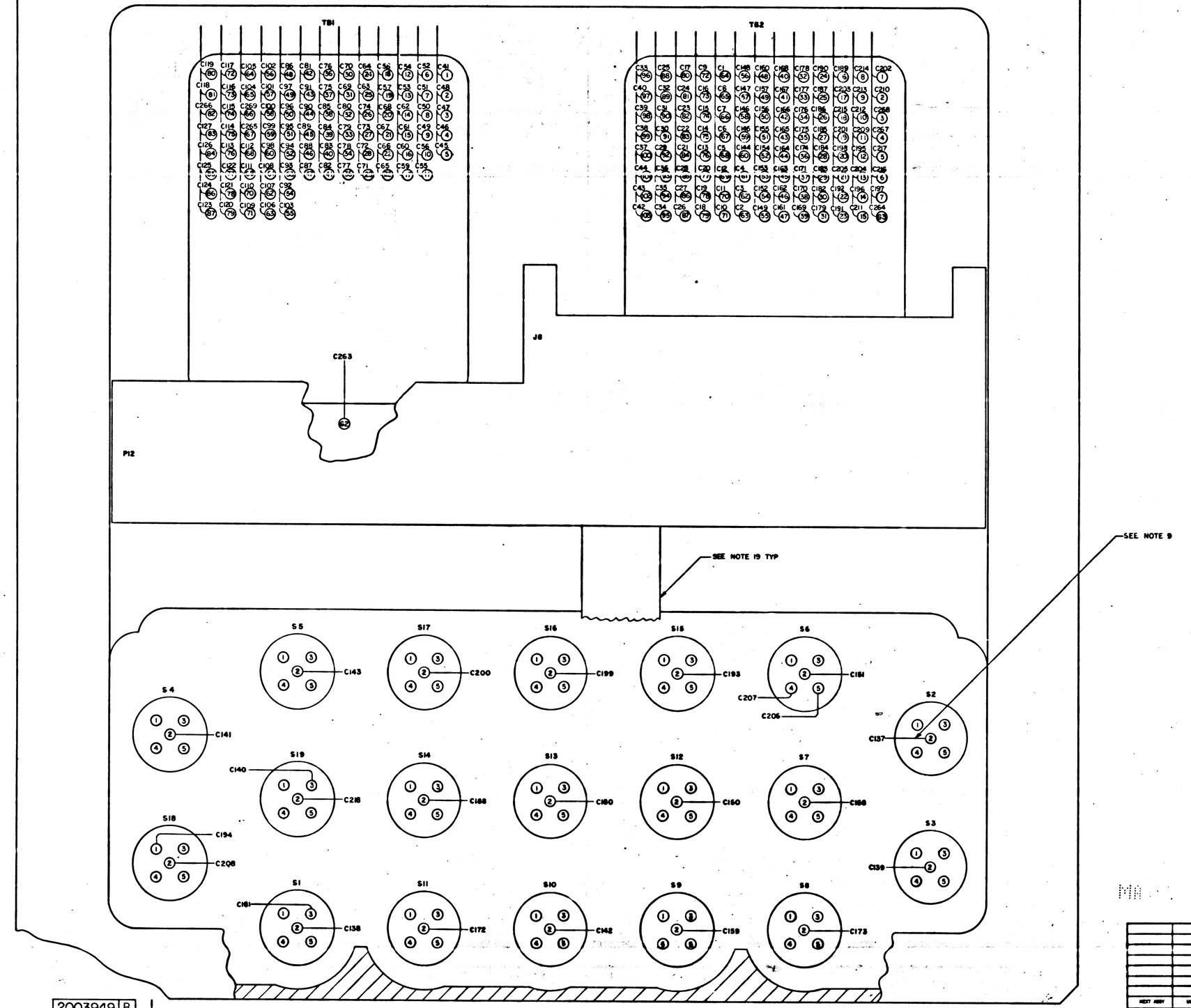


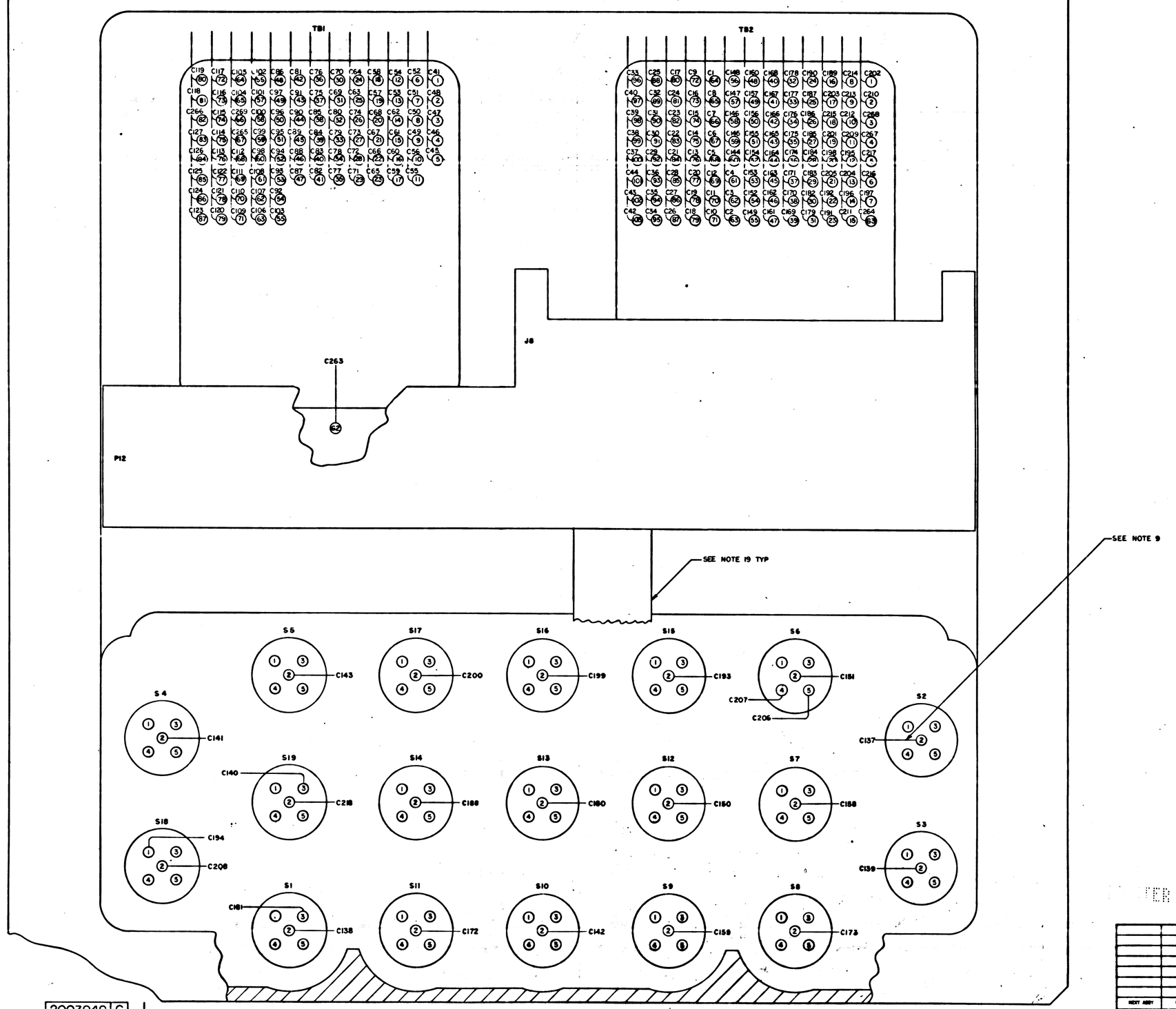
QTY REQD	PART OR IDENTIFYING NO
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
CAPACITOR VALUES ARE IN μf
RESISTOR VALUES ARE IN OHMS
TOLERANCES ON
FRACTIONS ±DECIMALS ANGLES
.x ± .xx ±
DO NOT SCALE THIS DRAWING
MATERIAL

M I T
INSTRUMENTATION LAB
CAMBRIDGE MASS

DRAWN
CHECKED
APPROVED
APPROVED
APPROVED M I T
APPROVED MSC


TB1
TB2
J8
C263
P12
SEE NOTE 19 TYP
SEE NOTE 9
S5
C143
S17
C200
S16
C199
S15
C193
S6
C181
C207
C206
S4
C141
S19
C140
C218
S14
C186
S13
C190
S12
C150
S7
C198
S2
C137
S18
C194
C208
S1
C181
C138
S11
C172
S10
C142
S9
C159
S8
C173
S3
C139


TB1
TB2
J8
P12
C263
SEE NOTE 19 TYP
SEE NOTE 9
S5
S17
S16
S15
S6
S4
S19
S14
S13
S12
S7
S18
S2
S3
S1
S11
S10
S9
S8
C143
C200
C199
C193
C181
C207
C206
C141
C140
C218
C188
C180
C150
C158
C194
C208
C137
C139
C181
C138
C172
C142
C159
C173

SYM	ZONE	REVISION
A		RE
B		RE
C		RE
D		RE

TB1

TB2

J8

C265

P12

SEE NOTE 19 TYP

SEE NOTE 9

S5 C143

S17 C200

S16 C199

S15 C193

S6 C151 C207 C206

S2 C137

S4 C141

S19 C140 C218

S14 C188

S13 C180

S12 C150

S7 C158

S18 C194 C208

S3 C139

S1 C181 C138

S11 C172

S10 C142

S9 C159

S8 C173

QTY REQD	PART OR IDENTIFYING NO

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
CAPACITANCE VALUES ARE IN μF
RESISTOR VALUES ARE IN OHMS
TOLERANCES ON
FRACTIONS DECIMALS ANGLES
± ± ±
DO NOT SCALE THIS DRAWING

MATERIAL

NEXT ASSY | USED ON
APPLICATION

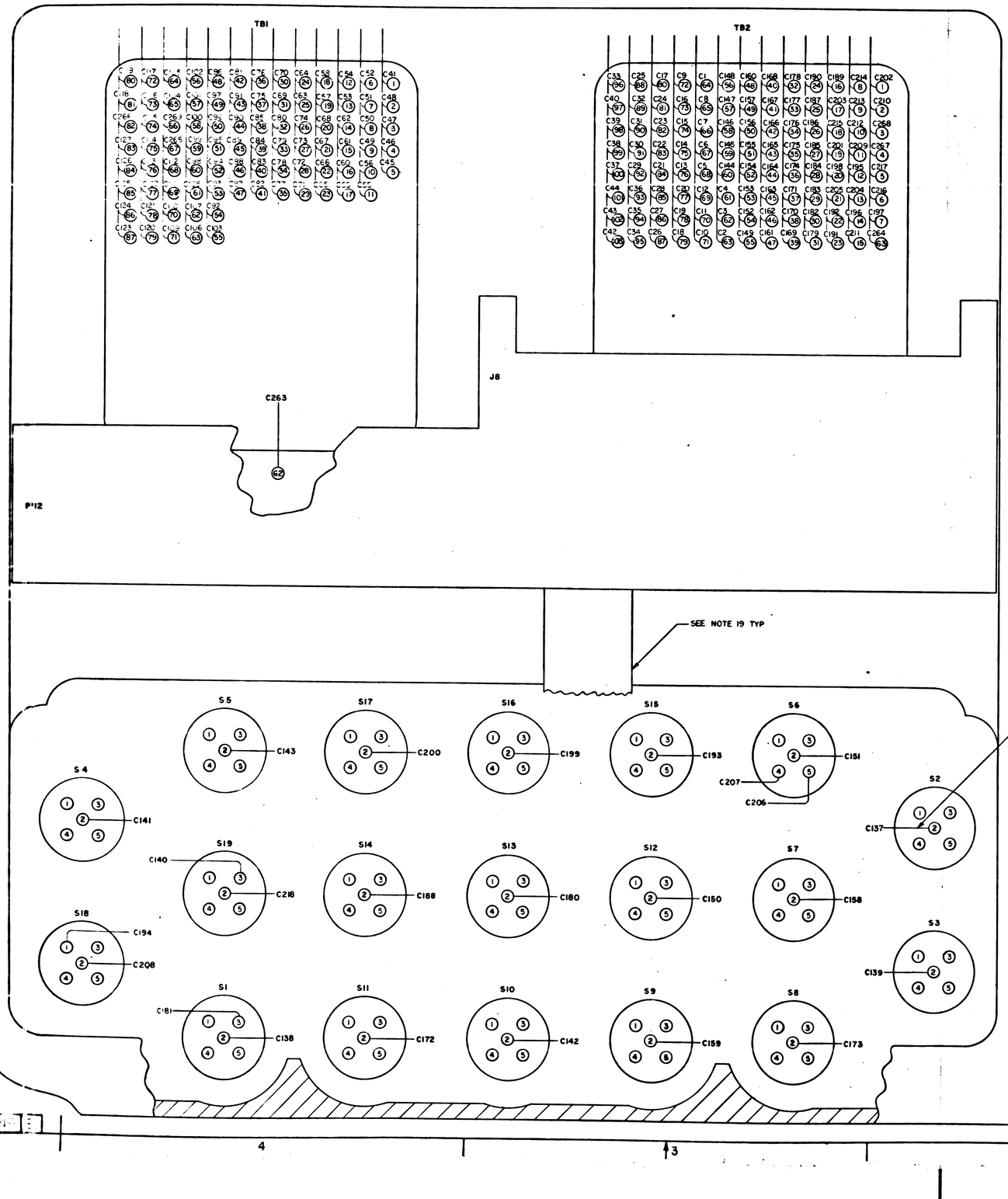
M I T
INSTRUMENTATION LAB

DRAWN
CHECKED
APPROVED
APPROVED
APPROVED MIT
DATE RELEASED
MISC

2003949 D

2003949 E

REVISIONS					
SYM	ZONE	DESCRIPTION	BY	CHK	DATE
A		REVISED PER TDRR 26856			
B		REVISED PER TDRR 27913			
C		REVISED PER TDRR 28178			
D		REVISED PER TDRR 29705			
E		REVISED PER TDRR 32580			



QTY REQD	PART OR IDENTIFYING NO	MATERIAL OR NOTES	NOMENCLATURE OR DESCRIPTION	FIN.

LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
CAPACITOR VALUES ARE IN μf
RESISTOR VALUES ARE IN OHMS
TOLERANCES ON
FRACTIONS DECIMALS ANGLES
± .
DO NOT SCALE THIS DRAWING
MATERIAL

NEXT ASSY | USED ON
APPLICATION

MIT INSTRUMENTATION LAB
CAMBRIDGE, MASS.

DRAWN
CHECKED
APPROVED
APPROVED
APPROVED MIT
APPROVED MSC

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

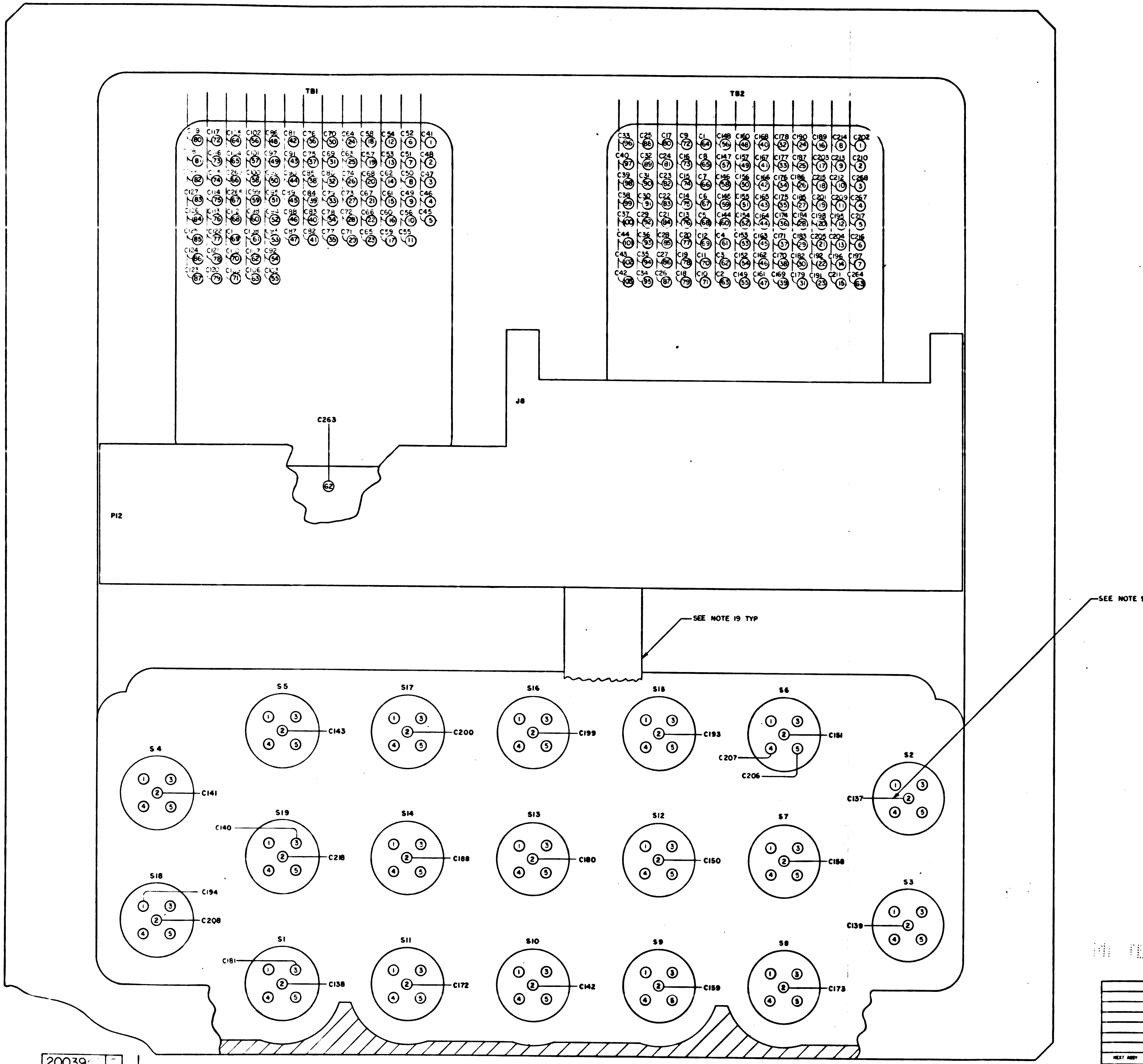
FRONT HOUSING ASSEMBLY
AGC DSKY

CODE IDENT NO 80230 | SIZE J | DRAWING NO. 2003949
DATE | SCALE NONE | SHT 2 OF 3

2003949 E 2 / 2

2003949

SYM	ZONE	DESCRIPTION
A		REVISED PER TDRR 26856
B		REVISED PER TDRR 27913
C		REVISED PER TDRR 29178
D		REVISED PER TDRR 29705
E		REVISED PER TDRR 32580
F		REVISED PER TDRR 33940
G		REVISED PER TDRR 34432



UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
CAPACITOR VALUES ARE IN µf
RESISTOR VALUES ARE IN OHMS
DO NOT SCALE THIS DRAWING

MIT INSTRUMENTATION LAB

MANNED SPACECRAFT CENTER

FRONT HOUSING ASSEMBLY

AGC DSKY

CODE IDENT NO	SIZE	DRAWING NO
80230	J	2003949

SCALE NONE — SHEET 2 OF 3

F2/2 2003949 G

LEAD ELECTRICAL

COND IDENT	REMARKS	FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
C1		P12-131	32	WHT	26	A R	TB2-64	
C2		-132					TB2-63	
C3		-133					TB2-62	
C4		-134					TB2-61	
C5		-127					TB2-68	
C6		-128					TB2-67	
C7		-129					TB2-66	
C8		-130					TB2-65	
C9		-123					TB2-72	
C10		-124					TB2-71	
C11		-125					TB2-70	
C12		-126					TB2-69	
C13		-119					TB2-76	
C14		-120					TB2-75	
C15		-121					TB2-74	
C16		-122					TB2-73	
C17		-115					TB2-80	
C18		-116					TB2-79	
C19		-117					TB2-78	
C20		-118					TB2-77	
C21		-111					TB2-84	
C22		-112					TB2-83	
C23		-113					TB2-82	
C24		-114					TB2-81	
C25		-107					TB2-88	
C26		-108					TB2-87	
C27		-109					TB2-86	
C28		-110					TB2-85	
C29		-103					TB2-92	
C30		-104					TB2-91	
C31		-105					TB2-90	
C32		-106					TB2-89	
C33		-99					TB2-96	
C34		-100					TB2-95	
C35		-101					TB2-94	
C36		-102					TB2-93	
C37		-95					TB2-100	
C38		-96					TB2-99	
C39		-97					TB2-98	
C40		-98					TB2-97	
C41		-91					TBI-1	
C42		-92					TB2-103	
C43		-93					TB2-102	
C44	SEE NOTE 6	-94					TB2-101	SEE NOTE 6
C45		-87					TBI-5	
C46		-88					TBI-4	
C47		-89					TBI-3	
C48		-90					TBI-2	
C49		-83					TBI-9	
C50		-84					TBI-8	
C51		-85					TBI-7	
C52		-86					TBI-6	
C53		-79					TBI-13	
C54		-80					TBI-12	
C55		-81					TBI-11	
C56		-82					TBI-10	
C57		-73					TBI-19	
C58		-74					TBI-18	
C59		-75					TBI-17	
C60		-76					TBI-16	
C61		-77					TBI-15	
C62		-78					TBI-14	
C63		-67					TBI-25	
C64		-68					TBI-24	
C65		-69					TBI-23	
C66		-70					TBI-22	
C67		-71					TBI-21	
C68		-72					TBI-20	
C69		-61					TBI-31	
C70		-62					TBI-30	
C71		-63					TBI-29	
C72		-64					TBI-28	
C73		-65					TBI-27	
C74		-66					TBI-26	
C75		-55					TBI-37	
C76		-56					TBI-36	
C77		-57					TBI-35	
C78		-58					TBI-34	
C79		-59					TBI-33	
C80		-60					TBI-32	
C81		-50					TBI-42	
C82		-51					TBI-41	
C83		-52					TBI-40	
C84		-53					TBI-39	
C85		-54					TBI-38	
C86		-43					TBI-48	
C87		-44					TBI-47	
C88		P12-45	32	WHT	26	A R	TBI-46	

LEAD ELECTRICAL

COND IDENT	REMARKS	FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
C89		P12-46	32	WHT	26	A R	TBI-45	
C90		-47					TBI-44	
C91		-48					TBI-43	
C92		-37					TBI-54	
C93		-38					TBI-53	
C94		-39					TBI-52	
C95		-40					TBI-51	
C96		-41					TBI-50	
C97		-42					TBI-49	
C98		-31					TBI-60	
C99		-32					TBI-59	
C100		-33					TBI-58	
C101		-34					TBI-57	
C102		-35					TBI-56	
C103		-36					TBI-55	
C104		-25					TBI-66	
C105		-27					TBI-64	
C106	SEE NOTE 6	-28					TBI 63	SEE NOTE 6
C107		-29					TBI-62	
C108		-30					TBI 61	
C109		-21					TBI-71	
C110		-22					TBI-70	
C111		-23					TBI-69	
C112		-24					TBI-68	
C113		-13					TBI-75	
C114		-15					TBI-74	
C115		-16					TBI-73	
C116		-17					TBI-72	
C117		-18					TBI-81	
C118		-7					TBI-80	
C119		-9					TBI-79	
C120		-10					TBI-78	
C121		-11					TBI-77	
C122		-12					TBI-87	
C123		-1					TBI-86	
C124		-3					TBI-85	
C125		-4					TBI-84	
C126		-5					TBI-83	
C127		P12-6	32	WHT				
C128		S16-1	35	YEL			SI7-3	
C129		S5-4	38	RED			SI9-4	
C130		S5-5	40	ORN			SI9-5	
C131		S19-4	38	RED			SI-4	
C132		S19-5	40	ORN			SI-5	
C133		SI-4	38	RED			SI8-4	
C134		SI-5	40	ORN			SI8-5	
C135	SEE NOTE 5	SI8-4	38	RED			S4-4	SEE NOTE 5
C136		SI8-5	40	ORN			S4-5	
C137		J8-3	33	WHT			S2-2	
C138		-5					SI-2	
C139		-8					S3-2	
C140		-9					SI9-3	
C141		-10					S4-2	
C142		-11					SI0-2	
C143		J8-13	33				S5-2	
C144		P12-135	32				TB2-60	
C145		-136					TB2-59	
C146	SEE NOTE 6	-137					TB2-58	SEE NOTE 6
C147		-138					TB2-57	
C148		-139					TB2-56	
C149		P12-140	32				TB2-55	
C150	SEE NOTE 5	J8-14	33				SI2-2	SEE NOTE 5
C151		J8-15	33				S6-2	
C152		P12-141	32				TB2-54	
C153		-142					TB2-53	
C154	SEE NOTE 6	-143					TB2-52	SEE NOTE 6
C155		-144					TB2-51	
C156		-145					TB2-50	
C157		P12-146	32				TB2-49	
C158	SEE NOTE 5	J8-16	33				S7-2	SEE NOTE 5
C159		J8-17	33				S9-2	
C160		P12-147	32				TB2-48	
C161		-148					-47	
C162		-149					-46	
C163		-150					-45	
C164		-151					-44	
C165	SEE NOTE 6	-152					-43	SEE NOTE 6
C166		-153					-42	
C167		-154					-41	
C168		-155					-40	
C169		-156					-39	
C170		-157					-38	
C171		P12-158	32				TB2-37	
C172	SEE NOTE 5	J8-18	33				SI1-2	SEE NOTE 5
C173		J8-19	33				S8-2	
C174	SEE NOTE 6	P12-159	32				TB2-36	
C175		P12-160	32				TB2-35	SEE NOTE 6
C176		P12-161	32	WHT	26	AR	TB2-34	

LEAD ELECTRICAL

COND IDENT	REMARKS	FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
C177		P12-162	32	WHT	26	A R	TB2-33	
C178	SEE NOTE 6	P12-163	32				TB2-32	SEE NOTE 6
C179		P12-164	32				TB2-31	
C180	SEE NOTE 5	J8-20	33				SI3-2	SEE NOTE 5
C181		J8-21	33				SI-3	
C182		P12-165	32				TB2-30	
C183		-166					-29	
C184	SEE NOTE 6	-167					-28	SEE NOTE 6
C185		-168					-27	
C186		-169					-26	
C187		P12-170	32				TB2-25	
C188	SEE NOTE 5	J8-22	33				SI4-2	SEE NOTE 5
C189		P12-190	32				TB2-16	
C190		-174					-24	
C191	SEE NOTE 6	-175					-23	SEE NOTE 6
C192		P12-176	32				TB2-22	
C193	SEE NOTE 5	J8-24	33				SI5-2	SEE NOTE 5
C194		J8-25	33				SI8-1	
C195		P12-196	32				TB2-12	
C196	SEE NOTE 6	-192					-14	SEE NOTE 6
C197		-204					-7	
C198		P12-182	32				TB2-20	
C199	SEE NOTE 5	J8-26	33				SI6-2	SEE NOTE 5
C200		J8-27	33				SI7-2	
C201		P12-185	32				TB2-19	
C202	SEE NOTE 6	-210					-1	SEE NOTE 6
C203		-157					-17	
C204		-195					-13	
C205		-181	32	WHT			TB2-21	
C206	SEE NOTE 5	-193	40	ORN			S6-5	SEE NOTE 5
C207		P12-194	38	RED			SC-4	
C208		J8-30	33	WHT			SI8-2	
C209		P12-197	32	WHT			TB2-11	
C210		-209					-2	
C211		-91					-15	
C212		-201					-10	
C213	SEE NOTE 6	-202					-9	SEE NOTE 6
C214		-203					-8	
C215		-186					-18	
C216		-207					-6	
C217		-208	32	WHT			TB2-5	
C218		P12-179	33	WHT			SI9-2	
C219		SI-1	35	YEL			S2-3	
C220		S2-1					S3-3	
C221		S3-1					S4-3	
C222		S4-1					S5-3	
C223		S5-1					S6-3	
C224		S6-1					S7-3	
C225		S7-1					S8-3	
C226		S8-1					S9-3	
C227		S9-1					SI0-3	
C228		SI0-1					SI1-3	
C229		SI1-1					SI2-3	
C230		SI2-1					SI3-3	
C231		SI3-1					SI4-3	
C232		SI4-1					SI5-3	
C233		SI5-1	35	YEL			SI6-3	
C234	SEE NOTE 5	SI7-4	38	RED			S5-4	
C235		SI7-5	40	ORN			S5-5	
C236		S6-4	38	RED			S2-4	
C237		S6-5	40	ORN			S2-5	
C238		S2-4	38	RED			S7-4	
C239		S2-5	40	ORN			S7-5	SEE NOTE 5
C240		S7-4	38	RED			S3-4	
C241		S7-5	40	ORN			S3-5	
C242		S3-4	38	RED			S8-4	
C243		S3-5	40	ORN			S8-5	
C244		S8-4	38	RED			S9-4	
C245		S8-5	40	ORN			S9-5	
C246		S9-4	38	RED			SI2-4	
C247		S9-5	40	ORN			SI2-5	
C248		SI2-4	38	RED			SI5-4	
C249		SI2-5	40	ORN			SI5-5	
C250		SI5-4	38	RED			SI6-4	
C251		SI5-5	40	ORN			SI6-5	
C252		SI6-4	38	RED			SI3-4	
C253		SI6-5	40	ORN			SI3-5	
C254		SI3-4	38	RED			SI0-4	
C255		SI3-5	40	ORN			SI0-5	
C256		SI0-4	38	RED			SI1-4	
C257		SI0-5	40	ORN			SI1-5	
C258		SI1-4	38	RED			SI4-4	
C259		SI1-5	40	ORN			SI4-5	
C260		SI4-4	38	RED			SI7-4	
C261		SI4-5	40	ORN			SI7-5	
C262		SI7-1	35	YEL			SI8-3	
C263	SEE NOTE 6	P12-184	32	WHT			62	SEE NOTE 6
C264	SEE NOTE 6	P12-183	41				63	SEE NOTE 5
C265		P12-20	32				TBI-67	
C266	SEE NOTE 6	P12-8					TBI-82	SEE NOTE 6
C267		P12-173					TB2-4	
C268		P12-177					TB2-3	
C269		P12-19	32	WHT	26	AR	TBI-66	

MASTER

2003949 -

LEAD ELECTRICAL

COND IDENT	REMARKS	FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
C1		P12-131	32	WHT	26	A R	TB2-64	
C2		-132					TB2-63	
C3		-133					TB2-62	
C4		-134					TB2-61	
C5		-135					TB2-60	
C6		-128					TB2-67	
C7		-129					TB2-66	
C8		-130					TB2-65	
C9		-123					TB2-72	
C10		-124					TB2-71	
C11		-125					TB2-70	
C12		-126					TB2-69	
C13		-119					TB2-76	
C14		-120					TB2-75	
C15		-121					TB2-74	
C16		-122					TB2-73	
C17		-115					TB2-80	
C18		-116					TB2-79	
C19		-117					TB2-78	
C20		-118					TB2-77	
C21		-111					TB2-84	
C22		-112					TB2-83	
C23		-113					TB2-82	
C24		-114					TB2-81	
C25		-107					TB2-88	
C26		-108					TB2-87	
C27		-109					TB2-86	
C28		-110					TB2-85	
C29		-103					TB2-92	
C30		-104					TB2-91	
C31		-105					TB2-90	
C32		-106					TB2-89	
C33		-99					TB2-96	
C34		-100					TB2-95	
C35		-101					TB2-94	
C36		-102					TB2-98	
C37		-95					TB2-100	
C38		-96					TB2-99	
C39		-97					TB2-98	
C40		-98					TB2-97	
C41		-91					TB1-1	
C42		-92					TB2-103	
C43		-93					TB2-102	
C44	SEE NOTE 6	-94					TB2-101	SEE NOTE 6
C45		-87					TB1-5	
C46		-88					TB1-4	
C47		-89					TB1-3	
C48		-90					TB1-2	
C49		-83					TB1-9	
C50		-84					TB1-8	
C51		-85					TB1-7	
C52		-86					TB1-6	
C53		-79					TB1-13	
C54		-80					TB1-12	
C55		-81					TB1-11	
C56		-82					TB1-10	
C57		-73					TB1-19	
C58		-74					TB1-18	
C59		-75					TB1-17	
C60		-76					TB1-16	
C61		-77					TB1-15	
C62		-78					TB1-14	
C63		-67					TB1-25	
C64		-68					TB1-24	
C65		-69					TB1-23	
C66		-70					TB1-22	
C67		-71					TB1-21	
C68		-72					TB1-20	
C69		-61					TB1-31	
C70		-62					TB1-30	
C71		-63					TB1-29	
C72		-64					TB1-28	
C73		-65					TB1-27	
C74		-66					TB1-26	
C75		-55					TB1-37	
C76		-56					TB1-36	
C77		-57					TB1-35	
C78		-58					TB1-34	
C79		-59					TB1-33	
C80		-60					TB1-32	
C81		-50					TB1-42	
C82		-51					TB1-41	
C83		-52					TB1-40	
C84		-53					TB1-39	
C85		-54					TB1-38	
C86		-43					TB1-48	
C87		-44					TB1-47	
C88		P12-45	32	WHT	26	AR	TB1-46	

LEAD ELECTRICAL

COND IDENT	REMARKS	FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
C89		P12-46	32	WHT	26	A R	TB1-45	
C90		-47					TB1-44	
C91		-48					TB1-43	
C92		-37					TB1-54	
C93		-38					TB1-53	
C94		-39					TB1-52	
C95		-40					TB1-51	
C96		-41					TB1-50	
C97		-42					TB1-49	
C98		-31					TB1-60	
C99		-32					TB1-59	
C100		-33					TB1-58	
C101		-34					TB1-57	
C102		-35					TB1-56	
C103		-36					TB1-55	
C104		-25					TB1-66	
C105		-27					TB1-64	
C106	SEE NOTE 6	-28					TB1 63	SEE NOTE 6
C107		-29					TB1-62	
C108		-30					TB1 61	
C109		-21					TB1-71	
C110		-22					TB1-70	
C111		-23					TB1-69	
C112		-24					TB1-68	
C113		-13					TB1-75	
C114		-15					TB1-74	
C115		-16					TB1-73	
C116		-17					TB1-72	
C117		-18					TB1-81	
C118		-7					TB1-80	
C119		-9					TB1-79	
C120		-10					TB1-78	
C121		-11					TB1-77	
C122		-12					TB1-87	
C123		-1					TB1-86	
C124		-3					TB1-85	
C125		-4					TB1-84	
C126		-5					TB1-83	
C127		P12-6	32	WHT			SI7-3	
C128		S16-1	35	YEL			S19-4	
C129		S5-4	38	RED			S19-5	
C130		S5-5	40	ORN			S1-4	
C131		S19-4	38	RED			S1-5	
C132		S19-5	40	ORN			S18-4	
C133		S1-4	38	RED			S18-5	
C134		S1-5	40	ORN			S4-4	
C135		S18-4	38	RED			S4-5	
C136	SEE NOTE 5	S18-5	40	ORN			S2-2	SEE NOTE 5
C137		J8-3	33	WHT			S1-2	
C138		-5					S3-2	
C139		-8					S19-3	
C140		-9					S4-2	
C141		-10					S10-2	
C142		-11					S5-2	
C143		J8-13	33				TB2-60	
C144		P12-135	32				TB2-59	
C145		-136					TB2-58	
C146	SEE NOTE 6	-137					TB2-57	SEE NOTE 6
C147		-138					TB2-56	
C148		-139					TB2-55	
C149		P12-140	32				S12-2	
C150	SEE NOTE 5	J8-14	33				S6-2	SEE NOTE 5
C151		J8-15	33				TB2-54	
C152		P12-141	32				TB2-53	
C153		-142					TB2-52	
C154	SEE NOTE 6	-143					TB2-51	SEE NOTE 6
C155		-144					TB2-50	
C156		-145					TB2-49	
C157		P12-146	32				S7-2	
C158	SEE NOTE 5	J8-16	33				S9-2	SEE NOTE 5
C159		J8-17	33				TB2-48	
C160		P12-147	32				-47	
C161		-148					-46	
C162		-149					-45	
C163		-150					-44	
C164		-151					-43	
C165	SEE NOTE 6	-152					-42	SEE NOTE 6
C166		-153					-41	
C167		-154					-40	
C168		-155					-39	
C169		-156					-38	
C170		-157					TB2-37	
C171		P12-158	32				S11-2	
C172	SEE NOTE 5	J8-18	33				S8-2	SEE NOTE 5
C173		J8-19	33				TB2-36	
C174		P12-159	32				TB2-35	SEE NOTE 6
C175	SEE NOTE 6	P12-160	32				TB2-34	
C176		P12-161	32	WHT	26	AR		

LEAD ELECTRICAL

COND IDENT	REMARKS	FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
C177		P12-162	32	WHT	26	A R	TB2-33	
C178	SEE NOTE 6	P12-163	32				TB2-32	SEE NOTE 6
C179		P12-164	32				TB2-31	
C180	SEE NOTE 5	J8-20	33				S13-2	SEE NOTE 5
C181		J8-21	33				S1-3	
C182		P12-165	32				TB2-30	
C183		-166					-29	
C184	SEE NOTE 6	-167					-28	SEE NOTE 6
C185		-168					-27	
C186		-169					-26	
C187		P12-170	32				TB2-25	
C188	SEE NOTE 5	J8-22	33				S14-2	SEE NOTE 5
C189		P12-190	32				TB2-16	
C190	SEE NOTE 6	-174					-24	SEE NOTE 6
C191		-175					-23	
C192		P12-176	32				TB2-22	
C193	SEE NOTE 5	J8-24	33				S15-2	SEE NOTE 5
C194		J8-25	33				S18-1	
C195	SEE NOTE 6	P12-196	32				TB2-12	
C196		-192					-14	SEE NOTE 6
C197		-204					-7	
C198		P12-182	32				TB2-20	
C199	SEE NOTE 5	J8-26	33				S16-2	SEE NOTE 5
C200		J8-27	33				S17-2	
C201		P12-185	32				TB2-19	
C202		-210					-1	
C203	SEE NOTE 6	-187					-17	SEE NOTE 6
C204		-195					-13	
C205		-181	32	WHT			TB2-21	
C206	SEE NOTE 6	-193	40	ORN			S6-5	
C207		P12-194	38	RED			S6-4	SEE NOTE 5
C208		J8-30	33	WHT			S18-2	
C209		P12-197	32	WHT			TB2-11	
C210		-209					-2	
C211		-191					-15	
C212		-201					-10	
C213	SEE NOTE 6	-202					-9	SEE NOTE 6
C214		-203					-8	
C215		-186					-18	
C216		-207					-6	
C217		-208	32	WHT			TB2-5	
C218		P12-179	33	WHT			S19-2	
C219		S1-1	35	YEL			S2-3	
C220		S2-1					S3-3	
C221		S3-1					S4-3	
C222		S4-1					S5-3	
C223		S6-1					S6-3	
C224		S6-1					S7-3	
C225		S7-1					S8-3	
C226		S8-1					S9-3	
C227		S9-1					S10-3	
C228		S10-1					S11-3	
C229		S11-1					S12-3	
C230		S12-1					S13-3	
C231		S13-1					S14-3	
C232		S14-1					S15-3	
C233		S15-1	35	YEL			S16-3	
C234	SEE NOTE 5	S17-4	38	RED			S5-4	
C235		S17-5	40	ORN			S5-5	
C236		S6-4	38	RED			S2-4	
C237		S6-5	40	ORN			S2-5	
C238		S2-4	38	RED			S7-4	
C239		S2-5	40	ORN			S7-5	SEE NOTE 5
C240		S7-4	38	RED			S3-4	
C241		S7-5	40	ORN			S3-5	
C242		S3-4	38	RED			S8-4	
C243		S3-5	40	ORN			S8-5	
C244		S8-4	38	RED			S9-4	
C245		S8-5	40	ORN			S9-5	
C246		S9-4	38	RED			S12-4	
C247		S9-5	40	ORN			S12-5	
C248		S12-4	38	RED			S15-4	
C249		S12-5	40	ORN			S15-5	
C250		S15-4	38	RED			S16-4	
C251		S15-5	40	ORN			S16-5	
C252		S16-4	38	RED			S13-4	
C253		S16-5	40	ORN			S13-5	
C254		S13-4	38	RED			S10-4	
C255		S13-5	40	ORN			S10-5	
C256		S10-4	38	RED			S11-4	
C257		S10-5	40	ORN			S11-5	
C258		S11-4	38	RED			S14-4	
C259		S11-5	40	ORN			S14-5	
C260		S14-4	38	RED			S17-4	
C261		S14-5	40	ORN			S17-5	
C262		S17-1	35	YEL			S18-3	
C263	SEE NOTE 6	P12-184	32	WHT			G2	SEE NOTE 6
C264	SEE NOTE 6	P12-183	41				G3	SEE NOTE 5
C265		P12-20	32				TBI-67	
C266	SEE NOTE 6	P12-8					TBI-82	SEE NOTE 6
C267		P12-173					TB2-4	
C268		P12-177					TB2-3	
C269		P12-19	32	WHT	26	AR	TBI-66	

QTY REQD	PART OR IDENTIFYING NO.

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
CAPACITOR VALUES ARE IN μf
RESISTOR VALUES ARE IN OHMS
TOLERANCES ON
FRACTIONS DECIMALS ANGLES
± ± ±
DO NOT SCALE THIS DRAWING

MATERIAL

NEXT ASSY | USED ON
APPLICATION

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INSTRUMENTATION
CAMBRIDGE MASS.

DRAWN
CHECKED
APPROVED
APPROVED
APPROVED MIT
APPROVED MSC

LEAD ELECTRICAL

COND IDENT	REMARKS	FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
C1		P12-131	32	WHT	26	AR	TB2-64	
C2		-132					TB2-63	
C3		-133					TB2-62	
C4		-134					TB2-61	
C5		-127					TB2-68	
C6		-128					TB2-67	
C7		-129					TB2-66	
C8		-130					TB2-65	
C9		-123					TB2-72	
C10		-124					TB2-71	
C11		-125					TB2-70	
C12		-126					TB2-69	
C13		-119					TB2-76	
C14		-120					TB2-75	
C15		-121					TB2-74	
C16		-122					TB2-73	
C17		-115					TB2-80	
C18		-116					TB2-79	
C19		-117					TB2-78	
C20		-118					TB2-77	
C21		-111					TB2-84	
C22		-112					TB2-83	
C23		-113					TB2-82	
C24		-114					TB2-81	
C25		-107					TB2-88	
C26		-108					TB2-87	
C27		-109					TB2-86	
C28		-110					TB2-85	
C29		-103					TB2-92	
C30		-104					TB2-91	
C31		-105					TB2-90	
C32		-106					TB2-89	
C33		-99					TB2-97	
C34		-100					TB2-95	
C35		-101					TB2-94	
C36		-102					TB2-93	
C37		-95					TB2-100	
C38		-96					TB2-99	
C39		-97					TB2-98	
C40		-98					TB2-97	
C41		-91					TB1-1	
C42		-92					TB2-103	
C43		-93					TB2-102	
C44	SEE NOTE 6	-94					TB2-101	SEE NOTE 6
C45		-87					TB1-5	
C46		-88					TB1-4	
C47		-89					TB1-3	
C48		-90					TB1-2	
C49		-83					TB1-9	
C50		-84					TB1-8	
C51		-85					TB1-7	
C52		-86					TB1-6	
C53		-79					TB1-13	
C54		-80					TB1-12	
C55		-81					TB1-11	
C56		-82					TB1-10	
C57		-73					TB1-19	
C58		-74					TB1-18	
C59		-75					TB1-17	
C60		-76					TB1-16	
C61		-77					TB1-15	
C62		-78					TB1-14	
C63		-67					TB1-25	
C64		-68					TB1-24	
C65		-69					TB1-23	
C66		-70					TB1-22	
C67		-71					TB1-21	
C68		-72					TB1-20	
C69		-61					TB1-31	
C70		-62					TB1-30	
C71		-63					TB1-29	
C72		-64					TB1-28	
C73		-65					TB1-27	
C74		-66					TB1-26	
C75		-55					TB1-37	
C76		-56					TB1-36	
C77		-57					TB1-35	
C78		-58					TB1-34	
C79		-59					TB1-33	
C80		-60					TB1-32	
C81		-50					TB1-42	
C82		-51					TB1-41	
C83		-52					TB1-40	
C84		-53					TB1-39	
C85		-54					TB1-38	
C86		-43					TB1-48	
C87		-44					TB1-47	
C88		P12-45	32	WHT	26	AR	TB1-46	

LEAD ELECTRICAL

COND IDENT	REMARKS	FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
C89		P12-46	32	WHT	26	AR	TB1-45	
C90		-47					TB1-44	
C91		-48					TB1-43	
C92		-37					TB1-54	
C93		-38					TB1-53	
C94		-39					TB1-52	
C95		-40					TB1-51	
C96		-41					TB1-50	
C97		-42					TB1-49	
C98		-31					TB1-60	
C99		-32					TB1-59	
C100		-33					TB1-58	
C101		-34					TB1-57	
C102		-35					TB1-56	
C103		-36					TB1-57	
C104		-25					TB1-65	
C105		-27					TB1-64	
C106	SEE NOTE 6	-28					TB1-63	SEE NOTE 6
C107		-29					TB1-62	
C108		-30					TB1-61	
C109		-21					TB1-71	
C110		-22					TB1-70	
C111		-23					TB1-69	
C112		-24					TB1-68	
C113		-13					TB1-76	
C114		-15					TB1-75	
C115		-16					TB1-74	
C116		-17					TB1-73	
C117		-18					TB1-72	
C118		-7					TB1-81	
C119		-9					TB1-80	
C120		-10					TB1-79	
C121		-11					TB1-78	
C122		-12					TB1-77	
C123		-1					TB1-87	
C124		-3					TB1-86	
C125		-4					TB1-85	
C126		-5					TB1-84	
C127		P12-6	32	WHT			TB1-83	
C128		S16-1	35	YEL			S17-3	
C129		S5-4	38	RED			S19-4	
C130		S5-5	40	ORN			S19-5	
C131		S19-4	38	RED			S1-4	
C132		S19-5	40	ORN			S1-5	
C133		S1-4	38	RED			S18-4	
C134		S1-5	40	ORN			S18-5	
C135	SEE NOTE 5	S18-4	38	RED			S4-4	SEE NOTE 5
C136		S18-5	40	ORN			S4-5	
C137		J8-3	33	WHT			S2-2	
C138		-5					S1-2	
C139		-8					S3-2	
C140		-9					S19-3	
C141		-10					S4-2	
C142		-11					S10-2	
C143		J8-13	33				S5-2	
C144		P12-135	32				TB2-60	
C145		-136					TB2-59	
C146	SEE NOTE 6	-137					TB2-58	SEE NOTE 6
C147		-138					TB2-57	
C148		-139					TB2-56	
C149		P12-140	32				TB2-55	
C150	SEE NOTE 5	J8-14	33				S12-2	SEE NOTE 5
C151		J8-15	33				S6-2	
C152		P12-141	32				TB2-54	
C153		-142					TB2-53	
C154	SEE NOTE 6	-143					TB2-52	SEE NOTE 6
C155		-144					TB2-51	
C156		-145					TB2-50	
C157		P12-146	32				TB2-49	
C158	SEE NOTE 5	J8-16	33				S7-2	SEE NOTE 5
C159		J8-17	33				S9-2	
C160		P12-147	32				TB2-48	
C161		-148					-47	
C162		-149					-46	
C163		-150					-45	
C164		-151					-44	
C165	SEE NOTE 6	-152					-43	SEE NOTE 6
C166		-153					-42	
C167		-154					-41	
C168		-155					-40	
C169		-156					-39	
C170		-157					-38	
C171		P12-158	32				TB2-37	
C172	SEE NOTE 5	J8-18	33				S11-2	SEE NOTE 5
C173		J8-19	33				S8-2	
C174		P12-159	32				TB2-36	
C175	SEE NOTE 6	P12-160	32				TB2-35	SEE NOTE 6
C176		P12-161	32	WHT	26	AR	TB2-34	

LEAD ELECTRICAL

COND IDENT	REMARKS	FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
C177		P12-162	32	WHT	26	AR	TB2-33	
C178	SEE NOTE 6	P12-163	32				TB2-32	SEE NOTE 6
C179		P12-164	32				TB2-31	
C180	SEE NOTE 5	J8-20	33				S13-2	SEE NOTE 5
C181		J8-21	33				S14-2	
C182		P12-165	32				TB2-30	
C183		-166					-29	
C184	SEE NOTE 6	-167					-28	SEE NOTE 6
C185		-168					-27	
C186		-169					-26	
C187		P12-170	32				TB2-25	
C188	SEE NOTE 5	J8-22	33				S14-2	SEE NOTE 5
C189		P12-190	32				TB2-16	
C190		-174					-24	
C191	SEE NOTE 6	-175					-23	SEE NOTE 6
C192		P12-176	32				TB2-22	
C193	SEE NOTE 5	J8-24	33				S15-2	SEE NOTE 5
C194		J8-25	33				S18-1	
C195		P12-196	32				TB2-12	
C196	SEE NOTE 6	-192					-14	SEE NOTE 6
C197		-204					-7	
C198		P12-182	32				TB2-20	
C199	SEE NOTE 5	J8-26	33				S16-2	SEE NOTE 5
C200		J8-27	33				S17-2	
C201		P12-185	32				TB2-19	
C202		-210					-1	
C203	SEE NOTE 6	-187					-17	SEE NOTE 6
C204		-195					-13	
C205		-181	32	WHT			TB2-21	
C206	SEE NOTE 8	-193	40	ORN			S6-5	
C207		P12-194	38	RED			S6-4	SEE NOTE 5
C208		J8-30	33	WHT			S18-2	
C209		P12-197	32	WHT			TB2-11	
C210		-209					-2	
C211		-191					-15	
C212		-201					-10	
C213	SEE NOTE 6	-202					-9	SEE NOTE 6
C214		-203					-8	
C215		-196					-18	
C216		-207					-6	
C217		-208	32	WHT			TB2-5	
C218		P12-179	33	WHT			S19-2	
C219		S1-1	35	YEL			S2-3	
C220		S2-1					S3-3	
C221		S3-1					S4-3	
C222		S4-1					S5-3	
C223		S6-1					S6-3	
C224		S6-1					S7-3	
C225		S7-1					S8-3	
C226		S8-1					S9-3	
C227		S9-1					S10-3	
C228		S10-1					S11-3	
C229		S11-1					S12-3	
C230		S12-1					S13-3	
C231		S13-1					S14-3	
C232		S14-1					S15-3	
C233		S15-1	35	YEL			S16-3	
C234	SEE NOTE 6	S17-4	38	RED			S5-4	SEE NOTE 5
C235		S17-5	40	ORN			S5-5	
C236		S6-4	38	RED			S2-4	
C237		S6-5	40	ORN			S2-5	
C238		S2-4	38	RED			S7-4	
C239		S2-5	40	ORN			S7-5	SEE NOTE 5
C240		S7-4	38	RED			S3-4	
C241		S7-5	40	ORN			S3-5	
C242		S3-4	38	RED			S8-4	
C243		S3-5	40	ORN			S8-5	
C244		S8-4	38	RED			S9-4	
C245		S8-5	40	ORN			S9-5	
C246		S9-4	38	RED			S12-4	
C247		S9-5	40	ORN			S12-5	
C248		S12-4	38	RED			S15-4	
C249		S12-5	40	ORN			S15-5	
C250		S15-4	38	RED			S16-4	
C251		S15-5	40	ORN			S16-5	
C252		S16-4	38	RED			S13-4	
C253		S16-5	40	ORN			S13-5	
C254		S13-4	38	RED			S10-4	
C255		S13-5	40	ORN			S10-5	
C256		S10-4	38	RED			S11-4	
C257		S10-5	40	ORN			S11-5	
C258		S11-4	38	RED			S14-4	
C259		S11-5	40	ORN			S14-5	
C260		S14-4	38	RED			S17-4	
C261		S14-5	40	ORN			S17-5	
C262		S17-1	35	YEL			S18-3	
C263	SEE NOTE 6	P12-184	32	WHT			62	SEE NOTE 6
C264	SEE NOTE 6	P12-183	41				63	SEE NOTE 5
C265		P12-20	32				TB1-67	
C266	SEE NOTE 6	P12-8					TB1-82	SEE NOTE 6
C267		P12-173					TB2-4	
C268		P12-177					TB2-3	
C269		P12-19	32	WHT	26	AR	TB1-66	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES CAPACITOR VALUES ARE IN µf RESISTOR VALUES ARE IN OHMS TOLERANCES ON FRACTIONS DECIMALS ANGLES .x ± .xx ± .xxx ± DO NOT SCALE THIS DRAWING MATERIAL

NEXT ASSY | USED ON | APPLICATION

DEPARTMENTAL

LEAD ELECTRICAL

COND IDENT	REMARKS	FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
C1		P12-131	32	WHT	26	AR	TB2-64	
C2		-132					TB2-63	
C3		-133					TB2-62	
C4		-134					TB2-61	
C5		-135					TB2-60	
C6		-128					TB2-67	
C7		-129					TB2-66	
C8		-130					TB2-65	
C9		-123					TB2-72	
C10		-124					TB2-71	
C11		-125					TB2-70	
C12		-126					TB2-69	
C13		-119					TB2-76	
C14		-120					TB2-75	
C15		-121					TB2-74	
C16		-122					TB2-73	
C17		-115					TB2-80	
C18		-116					TB2-79	
C19		-117					TB2-78	
C20		-118					TB2-77	
C21		-111					TB2-84	
C22		-112					TB2-83	
C23		-113					TB2-82	
C24		-114					TB2-81	
C25		-107					TB2-88	
C26		-108					TB2-87	
C27		-109					TB2-86	
C28		-110					TB2-85	
C29		-103					TB2-92	
C30		-104					TB2-91	
C31		-105					TB2-90	
C32		-106					TB2-89	
C33		-99					TB2-96	
C34		-100					TB2-95	
C35		-101					TB2-94	
C36		-102					TB2-93	
C37		-95					TB2-100	
C38		-96					TB2-99	
C39		-97					TB2-98	
C40		-98					TB2-97	
C41		-91					TB1-1	
C42		-92					TB2-103	
C43		-93					TB2-102	
C44	SEE NOTE 6	-94					TB2-101	SEE NOTE 6
C45		-87					TB1-5	
C46		-88					TB1-4	
C47		-89					TB1-3	
C48		-90					TB1-2	
C49		-83					TB1-9	
C50		-84					TB1-8	
C51		-85					TB1-7	
C52		-86					TB1-6	
C53		-79					TB1-13	
C54		-80					TB1-12	
C55		-81					TB1-11	
C56		-82					TB1-10	
C57		-73					TB1-19	
C58		-74					TB1-18	
C59		-75					TB1-17	
C60		-76					TB1-16	
C61		-77					TB1-15	
C62		-78					TB1-14	
C63		-67					TB1-25	
C64		-68					TB1-24	
C65		-69					TB1-23	
C66		-70					TB1-22	
C67		-71					TB1-21	
C68		-72					TB1-20	
C69		-61					TB1-31	
C70		-62					TB1-30	
C71		-63					TB1-29	
C72		-64					TB1-28	
C73		-65					TB1-27	
C74		-66					TB1-26	
C75		-55					TB1-37	
C76		-56					TB1-36	
C77		-57					TB1-35	
C78		-58					TB1-34	
C79		-59					TB1-33	
C80		-60					TB1-32	
C81		-50					TB1-42	
C82		-51					TB1-41	
C83		-52					TB1-40	
C84		-53					TB1-39	
C85		-54					TB1-38	
C86		-43					TB1-48	
C87		-44					TB1-47	
C88		P12-45	32	WHT	26	AR	TB1-46	

LEAD ELECTRICAL

COND IDENT	REMARKS	FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
C89		P12-46	32	WHT	26	AR	TB1-45	
C90		-47					TB1-44	
C91		-48					TB1-43	
C92		-37					TB1-54	
C93		-38					TB1-53	
C94		-39					TB1-52	
C95		-40					TB1-51	
C96		-41					TB1-50	
C97		-42					TB1-49	
C98		-31					TB1-60	
C99		-32					TB1-59	
C100		-33					TB1-58	
C101		-34					TB1-57	
C102		-35					TB1-56	
C103		-36					TB1-57	
C104		-25					TB1-65	
C105		-27					TB1-64	
C106	SEE NOTE 6	-28					TB1-63	SEE NOTE 6
C107		-29					TB1-62	
C108		-30					TB1-61	
C109		-21					TB1-71	
C110		-22					TB1-70	
C111		-23					TB1-69	
C112		-24					TB1-68	
C113		-13					TB1-76	
C114		-15					TB1-75	
C115		-16					TB1-74	
C116		-17					TB1-73	
C117		-18					TB1-72	
C118		-7					TB1-81	
C119		-9					TB1-80	
C120		-10					TB1-79	
C121		-11					TB1-78	
C122		-12					TB1-77	
C123		-1					TB1-87	
C124		-3					TB1-86	
C125		-4					TB1-85	
C126		-5					TB1-84	
C127		P12-6	32	WHT			TB1-83	
C128		S16-1	35	YEL			S17-3	
C129		S5-4	38	RED			S19-4	
C130		S5-5	40	ORN			S19-5	
C131		S19-4	38	RED			S1-4	
C132		S19-5	40	ORN			S1-5	
C133		S1-4	38	RED			S18-4	
C134		S1-5	40	ORN			S18-5	
C135	SEE NOTE 5	S18-4	38	RED			S4-4	SEE NOTE 5
C136		S18-5	40	ORN			S4-5	
C137		J8-3	33	WHT			S2-2	
C138		-5					S1-2	
C139		-8					S3-2	
C140		-9					S19-3	
C141		-10					S4-2	
C142		-11					S10-2	
C143		J8-13	33				S5-2	
C144		P12-135	32				TB2-60	
C145		-136					TB2-59	
C146	SEE NOTE 6	-137					TB2-58	SEE NOTE 6
C147		-138					TB2-57	
C148		-139					TB2-56	
C149		P12-140	32				TB2-55	
C150	SEE NOTE 5	J8-14	33				S12-2	SEE NOTE 5
C151		J8-15	33				S6-2	
C152		P12-141	32				TB2-54	
C153		-142					TB2-53	
C154	SEE NOTE 6	-143					TB2-52	SEE NOTE 6
C155		-144					TB2-51	
C156		-145					TB2-50	
C157		P12-146	32				TB2-49	
C158	SEE NOTE 5	J8-16	33				S7-2	SEE NOTE 5
C159		J8-17	33				S9-2	
C160		P12-147	32				TB2-48	
C161		-148					-47	
C162		-149					-46	
C163		-150					-45	
C164		-151					-44	
C165	SEE NOTE 6	-152					-43	SEE NOTE 6
C166		-153					-42	
C167		-154					-41	
C168		-155					-40	
C169		-156					-39	
C170		-157					-38	
C171		P12-158	32				TB2-37	
C172	SEE NOTE 5	J8-18	33				S11-2	SEE NOTE 5
C173		J8-19	33				S8-2	
C174		P12-159	32				TB2-36	
C175	SEE NOTE 6	P12-160	32				TB2-35	SEE NOTE 6
C176		P12-161	32	WHT	26	AR	TB2-34	

LEAD ELECTRICAL

COND IDENT	REMARKS	FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
C177		P12-162	32	WHT	26	AR	TB2-33	
C178	SEE NOTE 6	P12-163	32				TB2-32	SEE NOTE 6
C179		P12-164	32				TB2-31	
C180	SEE NOTE 5	JA-20	33				S13-2	SEE NOTE 5
C181		J8-21	33				S1-3	
C182		P12-165	32				TB2-30	
C183		-166					-29	
C184	SEE NOTE 6	-167					-28	SEE NOTE 6
C185		-168					-27	
C186		-169					-26	
C187		P12-170	32				TB2-25	
C188	SEE NOTE 5	J8-22	33				S14-2	SEE NOTE 5
C189		P12-190	32				TB2-16	
C190		-174					-24	
C191	SEE NOTE 6	-175					-23	SEE NOTE 6
C192		P12-176	32				TB2-22	
C193	SEE NOTE 5	J8-24	33				S15-2	SEE NOTE 5
C194		J8-25	33				S18-1	
C195		P12-196	32				TB2-12	
C196	SEE NOTE 6	-192					-14	SEE NOTE 6
C197		-204					-7	
C198		P12-182	32				TB2-20	
C199	SEE NOTE 5	J8-26	33				S16-2	SEE NOTE 5
C200		J8-27	33				S17-2	
C201		P12-185	32				TB2-19	
C202		-210					-1	
C203	SEE NOTE 6	-187					-17	SEE NOTE 6
C204		-195					-13	
C205		-181	32	WHT			TB2-21	
C206	SEE NOTE 8	-193	40	ORN			S6-5	
C207		P12-194	38	RED			S6-4	SEE NOTE 5
C208		J8-30	33	WHT			S18-2	
C209		P12-197	32	WHT			TB2-11	
C210		-209					-2	
C211		-191					-15	
C212	SEE NOTE 6	-201					-10	SEE NOTE 6
C213		-202					-9	
C214		-203					-8	
C215		-186					-18	
C216		-207					-6	
C217		-208	32	WHT			TB2-5	
C218		P12-179	33	WHT			S15-2	
C219		S1-1	35	YEL			S2-3	
C220		S2-1					S3-3	
C221		S3-1					S4-3	
C222		S4-1					S5-3	
C223		S5-1					S6-3	
C224		S6-1					S7-3	
C225		S7-1					S8-3	
C226		S8-1					S9-3	
C227		S9-1					S10-3	
C228		S10-1					S11-3	
C229		S11-1					S12-3	
C230		S12-1					S13-3	
C231		S13-1					S14-3	
C232		S14-1					S15-3	
C233		S15-1	35	YEL			S16-3	
C234	SEE NOTE 5	S17-4	38	RED			S5-4	
C235		S17-5	40	ORN			S5-5	
C236		S6-4	38	RED			S2-4	
C237		S6-5	40	ORN			S2-5	
C238		S2-4	38	RED			S7-4	
C239		S2-5	40	ORN			S7-5	SEE NOTE 5
C240		S7-4	38	RED			S3-4	
C241		S7-5	40	ORN			S3-5	
C242		S3-4	38	RED			S8-4	
C243		S3-5	40	ORN			S8-5	
C244		S8-4	38	RED			S9-4	
C245		S8-5	40	ORN			S9-5	
C246		S9-4	38	RED			S12-4	
C247		S9-5	40	ORN			S12-5	
C248		S12-4	38	RED			S15-4	
C249		S12-5	40	ORN			S15-5	
C250		S15-4	38	RED			S16-4	
C251		S15-5	40	ORN			S16-5	
C252		S16-4	38	RED			S13-4	
C253		S16-5	40	ORN			S13-5	
C254		S13-4	38	RED			S10-4	
C255		S13-5	40	ORN			S10-5	
C256		S10-4	38	RED			S11-4	
C257		S10-5	40	ORN			S11-5	
C258		S11-4	38	RED			S14-4	
C259		S11-5	40	ORN			S14-5	
C260		S14-4	38	RED			S17-4	
C261		S14-5	40	ORN			S17-5	
C262		S17-1	35	YEL			S18-3	
C263	SEE NOTE 6	P12-184	32	WHT			62	SEE NOTE 6
C264	SEE NOTE 6	P12-183	41				63	SEE NOTE 5
C265	SEE NOTE 6	P12-20	32				TB1-67	SEE NOTE 6
C266		P12-8					TB1-82	
C267		P12-175					TB2-4	
C268		P12-177					TB2-3	
C269		P12-19	32	WHT	26	AR	TB1-66	

JTY REQD	PART OR IDENTIFYING NO.
	M.I.T. INSTRUMENTATION LAB CAMBRIDGE MASS

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. CAPACITOR VALUES ARE IN μf. RESISTOR VALUES ARE IN OHMS. TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ± . DO NOT SCALE THIS DRAWING.

MATERIAL

NEXT ASSY | USED ON | APPLICATION

DRAWN J.F. Lynch | CHECKED | APPROVED | APPROVED | APPROVED BIT | APPROVED MSC

LEAD ELECTRICAL

COND IDENT	REMARKS	FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
C1		P12-131	32	WHT	26	AR	TB2-64	
C2		-132					TB2-63	
C3		-133					TB2-62	
C4		-134					TB2-61	
C5		-127					TB2-68	
C6		-128					TB2-67	
C7		-129					TB2-66	
C8		-130					TB2-65	
C9		-123					TB2-72	
C10		-124					TB2-71	
C11		-125					TB2-70	
C12		-126					TB2-69	
C13		-119					TB2-76	
C14		-120					TB2-75	
C15		-121					TB2-74	
C16		-122					TB2-73	
C17		-115					TB2-80	
C18		-116					TB2-79	
C19		-117					TB2-78	
C20		-118					TB2-77	
C21		-111					TB2-84	
C22		-112					TB2-83	
C23		-113					TB2-82	
C24		-114					TB2-81	
C25		-107					TB2-88	
C26		-108					TB2-87	
C27		-109					TB2-86	
C28		-110					TB2-85	
C29		-103					TB2-92	
C30		-104					TB2-91	
C31		-105					TB2-90	
C32		-106					TB2-89	
C33		-99					TB2-96	
C34		-100					TB2-95	
C35		-101					TB2-94	
C36		-102					TB2-93	
C37		-95					TB2-100	
C38		-96					TB2-99	
C39		-97					TB2-98	
C40		-98					TB2-97	
C41		-91					TB1-1	
C42		-92					TB2-103	
C43		-93					TB2-102	
C44	SEE NOTE 6	-94					TB2-101	SEE NOTE 6
C45		-87					TB1-5	
C46		-88					TB1-4	
C47		-89					TB1-3	
C48		-90					TB1-2	
C49		-83					TB1-9	
C50		-84					TB1-8	
C51		-85					TB1-7	
C52		-86					TB1-6	
C53		-79					TB1-13	
C54		-80					TB1-12	
C55		-81					TB1-11	
C56		-82					TB1-10	
C57		-73					TB1-19	
C58		-74					TB1-18	
C59		-75					TB1-17	
C60		-76					TB1-16	
C61		-77					TB1-15	
C62		-78					TB1-14	
C63		-67					TB1-25	
C64		-68					TB1-24	
C65		-69					TB1-23	
C66		-70					TB1-22	
C67		-71					TB1-21	
C68		-72					TB1-20	
C69		-61					TB1-31	
C70		-62					TB1-30	
C71		-63					TB1-29	
C72		-64					TB1-28	
C73		-65					TB1-27	
C74		-66					TB1-26	
C75		-55					TB1-37	
C76		-56					TB1-36	
C77		-57					TB1-35	
C78		-58					TB1-34	
C79		-59					TB1-33	
C80		-60					TB1-32	
C81		-50					TB1-42	
C82		-51					TB1-41	
C83		-52					TB1-40	
C84		-53					TB1-39	
C85		-54					TB1-38	
C86		-43					TB1-48	
C87		-44					TB1-47	
C88		P12-45	32	WHT	26	AR	TB1-46	

LEAD ELECTRICAL

COND IDENT	REMARKS	FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
C89		P12-46	32	WHT	26	AR	TB1-45	
C90		-47					TB1-44	
C91		-48					TB1-43	
C92		-37					TB1-54	
C93		-38					TB1-53	
C94		-33					TB1-52	
C95		-40					TB1-51	
C96		-41					TB1-50	
C97		-42					TB1-49	
C98		-31					TB1-60	
C99		-32					TB1-59	
C100		-33					TB1-58	
C101		-34					TB1-57	
C102		-35					TB1-56	
C103		-36					TB1-57	
C104		-25					TB1-65	
C105		-27					TB1-64	
C106	SEE NOTE 6	-28					TB1-63	SEE NOTE 6
C107		-29					TB1-62	
C108		-30					TB1-61	
C109		-21					TB1-71	
C110		-22					TB1-70	
C111		-23					TB1-69	
C112		-24					TB1-68	
C113		-13					TB1-76	
C114		-15					TB1-75	
C115		-16					TB1-74	
C116		-17					TB1-73	
C117		-18					TB1-72	
C118		-7					TB1-81	
C119		-9					TB1-80	
C120		-10					TB1-79	
C121		-11					TB1-78	
C122		-12					TB1-77	
C123		-1					TB1-87	
C124		-3					TB1-86	
C125		-4					TB1-85	
C126		-5					TB1-84	
C127		P12-6	32	WHT			TB1-83	
C128		S16-1	35	YEL			S17-3	
C129		S5-4	38	RED			S19-4	
C130		S5-5	40	ORN			S19-5	
C131		S19-4	38	RED			S1-4	
C132		S19-5	40	ORN			S1-5	
C133		S1-4	38	RED			S18-4	
C134		S1-5	40	ORN			S18-5	
C135		S18-4	38	RED			S4-4	
C136	SEE NOTE 6	S18-5	40	ORN			S4-5	SEE NOTE 5
C137		J8-3	33	WHT			S2-2	
C138		-5					S1-2	
C139		-8					S3-2	
C140		-9					S19-3	
C141		-10					S4-2	
C142		-11					S10-2	
C143		J8-3	33				S5-2	
C144		P12-135	32				TB2-60	
C145		-136					TB2-59	
C146	SEE NOTE 6	-137					TB2-58	SEE NOTE 6
C147		-138					TB2-57	
C148		-139					TB2-56	
C149		P12-140	32				TB2-55	
C150	SEE NOTE 5	J8-14	33				S12-2	SEE NOTE 5
C151		J8-15	33				S6-2	
C152		P12-141	32				TB2-54	
C153		-142					TB2-53	
C154	SEE NOTE 6	-143					TB2-52	SEE NOTE 6
C155		-144					TB2-51	
C156		-145					TB2-50	
C157		P12-146	32				TB2-49	
C158	SEE NOTE 5	J8-16	33				S7-2	SEE NOTE 5
C159		J8-17	33				S9-2	
C160		P12-147	32				TB2-48	
C161		-148					-47	
C162		-149					-46	
C163		-150					-45	
C164		-151					-44	
C165	SEE NOTE 6	-152					-43	SEE NOTE 6
C166		-153					-42	
C167		-154					-41	
C168		-155					-40	
C169		-156					-39	
C170		-157					-38	
C171		P12-158	32				TB2-37	
C172	SEE NOTE 5	J8-18	33				S11-2	SEE NOTE 5
C173		J8-19	33				S8-2	
C174		P12-159	32				TB2-36	
C175	SEE NOTE 6	P12-160	32				TB2-35	SEE NOTE 6
C176		P12-161	32	WHT	26	AR	TB2-34	

LEAD ELECTRICAL

COND IDENT	REMARKS	FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
C177		P12-162	32	WHT	26	AR	TB2-33	
C178	SEE NOTE 6	P12-163	32				TB2-32	SEE NOTE 6
C179		P12-164	32				TB2-31	
C180	SEE NOTE 5	J8-20	33				S13-2	SEE NOTE 5
C181		J8-21	33				S15-3	
C182		P12-165	32				TB2-30	
C183		-166					-29	
C184	SEE NOTE 6	-167					-28	SEE NOTE 6
C185		-168					-27	
C186		-169					-26	
C187		P12-170	32				TB2-25	
C188	SEE NOTE 5	J8-22	33				S14-2	SEE NOTE 5
C189		P12-190	32				TB2-16	
C190	SEE NOTE 6	-174					-24	SEE NOTE 6
C191		-175					-23	
C192		P12-176	32				TB2-22	
C193	SEE NOTE 5	J8-24	33				S15-2	SEE NOTE 5
C194		J8-25	33				S18-1	
C195		P12-196	32				TB2-12	
C196	SEE NOTE 6	-192					-14	SEE NOTE 6
C197		-204					-7	
C198		P12-182	32				TB2-20	
C199	SEE NOTE 5	J8-26	33				S16-2	SEE NOTE 5
C200		J8-27	33				S17-2	
C201		P12-185	32				TB2-19	
C202	SEE NOTE 6	-210					-1	SEE NOTE 6
C203		-187					-17	
C204		-195					-13	
C205		-181	32	WHT			TB2-21	
C206	SEE NOTE 5	-193	40	ORN			S6-5	
C207		P12-194	38	RED			S6-4	SEE NOTE 5
C208		J8-30	33	ORN			S18-2	
C209		P12-197	32	WHT			TB2-11	
C210		-209					-2	
C211		-191					-15	
C212	SEE NOTE 6	-201					-10	SEE NOTE 6
C213		-202					-9	
C214		-203					-8	
C215		-186					-18	
C216		-207					-6	
C217		-208	32	WHT			TB2-5	
C218		P12-179	33	WHT			S19-2	
C219		S1-1	35	YEL			S2-3	
C220		S2-1					S3-3	
C221		S3-1					S4-3	
C222		S4-1					S5-3	
C223		S6-1					S6-3	
C224		S6-1					S7-3	
C225		S7-1					S8-3	
C226		S8-1					S9-3	
C227		S9-1					S10-3	
C228		S10-1					S11-3	
C229		S11-1					S12-3	
C230		S12-1					S13-3	
C231		S13-1					S14-3	
C232		S14-1					S15-3	
C233		S15-1	35	YEL			S16-3	
C234	SEE NOTE 5	S17-4	38	RED			S5-4	
C235		S17-5	40	ORN			S5-5	
C236		S6-4	38	RED			S2-4	
C237		S6-5	40	ORN			S2-5	
C238		S2-4	38	RED			S7-4	SEE NOTE 5
C239		S2-5	40	ORN			S7-5	
C240		S7-4	38	RED			S3-4	
C241		S7-5	40	ORN			S3-5	
C242		S3-4	38	RED			S8-4	
C243		S3-5	40	ORN			S8-5	
C244		S8-4	38	RED			S9-4	
C245		S8-5	40	ORN			S9-5	
C246		S9-4	38	RED			S12-4	
C247		S9-5	40	ORN			S12-5	
C248		S12-4	38	RED			S15-4	
C249		S12-5	40	ORN			S5-5	
C250		S15-4	38	RED			S16-4	
C251		S15-5	40	ORN			S16-5	
C252		S16-4	38	RED			S13-4	
C253		S16-5	40	ORN			S13-5	
C254		S13-4	38	RED			S10-4	
C255		S13-5	40	ORN			S10-5	
C256		S10-4	38	RED			S11-4	
C257		S10-5	40	ORN			S11-5	
C258		S11-4	38	RED			S14-4	
C259		S11-5	40	ORN			S14-5	
C260		S14-4	38	RED			S17-4	
C261		S14-5	40	ORN			S17-5	
C262		S17-1	35	YEL			S18-3	
C263	SEE NOTE 6	P12-184	32	WHT			62	SEE NOTE 6
C264	SEE NOTE 6	P12-183	41				63	SEE NOTE 5
C265		P12-20	32				TB1-67	
C266	SEE NOTE 6	P12-8					TB1-82	SEE NOTE 6
C267		P12-175					TB2-4	
C268		P12-177					TB2-3	
C269		P12-19	32	WHT	26	AR	TB1-66	

MASTER

2003949 E

REVISIONS					
LTR	ZONE	DESCRIPTION	BY	CHK	DATE	APPROVED
A		REVISED PER TDRR 26856				
B		REVISED PER TDRR 27913				
C		REVISED PER TDRR 28178				
D		REVISED PER TDRR 29705				
E		REVISED PER TDRR 32580				

LEAD ELECTRICAL

FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
P12-131	32	WHT	26	AR	TB2-64	
-132					TB2-63	
-133					TB2-62	
-134					TB2-61	
-127					TB2-68	
-128					TB2-67	
-129					TB2-66	
-130					TB2-65	
-123					TB2-72	
-124					TB2-71	
-125					TB2-70	
-126					TB2-69	
-119					TB2-76	
-120					TB2-75	
-121					TB2-74	
-122					TB2-73	
-115					TB2-80	
-116					TB2-79	
-117					TB2-78	
-118					TB2-77	
-111					TB2-84	
-112					TB2-83	
-113					TB2-82	
-114					TB2-81	
-107					TB2-88	
-108					TB2-87	
-109					TB2-86	
-110					TB2-85	
-103					TB2-92	
-104					TB2-91	
-105					TB2-90	
-106					TB2-89	
-99					TB2-96	
-100					TB2-95	
-101					TB2-94	
-102					TB2-93	
-95					TB2-100	
-96					TB2-99	
-97					TB2-98	
-98					TB2-97	
-91					TB1-1	
-92					TB2-103	
-93					TB2-102	
-94					TB2-101	SEE NOTE 6
-87					TB1-5	
-88					TB1-4	
-89					TB1-3	
-90					TB1-2	
-83					TB1-9	
-84					TB1-8	
-85					TB1-7	
-86					TB1-6	
-79					TB1-13	
-80					TB1-12	
-81					TB1-11	
-82					TB1-10	
-73					TB1-19	
-74					TB1-18	
-75					TB1-17	
-76					TB1-16	
-77					TB1-15	
-78					TB1-14	
-67					TB1-25	
-68					TB1-24	
-69					TB1-23	
-70					TB1-22	
-71					TB1-21	
-72					TB1-20	
-61					TB1-31	
-62					TB1-30	
-63					TB1-29	
-64					TB1-28	
-65					TB1-27	
-66					TB1-26	
-55					TB1-37	
-56					TB1-36	
-57					TB1-35	
-58					TB1-34	
-59					TB1-33	
-60					TB1-32	
-50					TB1-42	
-51					TB1-41	
-52					TB1-40	
-53					TB1-39	
-54					TB1-38	
-43					TB1-48	
-44					TB1-47	
P12-45	32	WHT	26	AR	TB1-46	

LEAD ELECTRICAL

COND IDENT	REMARKS	FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
C89		P12-46	32	WHT	26	AR	TB1-45	
C90		-47					TB1-44	
C91		-48					TB1-43	
C92		-37					TB1-54	
C93		-38					TB1-53	
C94		-39					TB1-52	
C95		-40					TB1-51	
C96		-41					TB1-50	
C97		-42					TB1-49	
C98		-31					TB1-60	
C99		-32					TB1-59	
C100		-33					TB1-58	
C101		-34					TB1-57	
C102		-35					TB1-56	
C103		-36					TB1-57	
C104		-25					TB1-65	
C105		-27					TB1-64	
C106	SEE NOTE 6	-28					TB1-63	SEE NOTE 6
C107		-29					TB1-62	
C108		-30					TB1-61	
C109		-21					TB1-71	
C110		-22					TB1-70	
C111		-23					TB1-69	
C112		-24					TB1-68	
C113		-13					TB1-76	
C114		-15					TB1-75	
C115		-16					TB1-74	
C116		-17					TB1-73	
C117		-18					TB1-72	
C118		-7					TB1-81	
C119		-9					TB1-80	
C120		-10					TB1-79	
C121		-11					TB1-78	
C122		-12					TB1-77	
C123		-1					TB1-87	
C124		-3					TB1-86	
C125		-4					TB1-85	
C126		-5					TB1-84	
C127		P12-6	32	WHT			TB1-83	
C128		S16-1	35	YEL			S17-3	
C129		S5-4	38	RED			S19-4	
C130		S5-5	40	ORN			S19-5	
C131		S19-4	38	RED			S1-4	
C132		S19-5	40	ORN			S1-5	
C133		S1-4	38	RED			S18-4	
C134		S1-5	40	ORN			S18-5	
C135	SEE NOTE 5	S18-4	38	RED			S4-4	SEE NOTE 5
C136		S18-5	40	ORN			S4-5	
C137		J8-3	33	WHT			S2-2	
C138		-5					S1-2	
C139		-8					S3-2	
C140		-9					S19-3	
C141		-10					S4-2	
C142		-11					S10-2	
C143		J8-13	33				S5-2	
C144		P12-135	32				TB2-60	
C145		-136					TB2-59	
C146	SEE NOTE 6	-137					TB2-58	SEE NOTE 6
C147		-138					TB2-57	
C148		-139					TB2-56	
C149		P12-140	32				TB2-55	
C150	SEE NOTE 5	J8-14	33				S12-2	SEE NOTE 5
C151		J8-15	33				S6-2	
C152		P12-141	32				TB2-54	
C153		-142					TB2-53	
C154	SEE NOTE 6	-143					TB2-52	SEE NOTE 6
C155		-144					TB2-51	
C156		-145					TB2-50	
C157		P12-146	32				TB2-49	
C158	SEE NOTE 5	J8-16	33				S7-2	SEE NOTE 5
C159		J8-17	33				S9-2	
C160		P12-147	32				TB2-48	
C161		-148					-47	
C162		-149					-46	
C163		-150					-45	
C164		-151					-44	
C165		-152					-43	
C166	SEE NOTE 6	-153					-42	SEE NOTE 6
C167		-154					-41	
C168		-155					-40	
C169		-156					-39	
C170		-157					-38	
C171		P12-158	32				TB2-37	
C172	SEE NOTE 5	J8-18	33				S11-2	SEE NOTE 5
C173		J8-19	33				S8-2	
C174		P12-159	32				TB2-36	
C175	SEE NOTE 6	P12-160	32				TB2-35	SEE NOTE 6
C176		P12-161	32	WHT	26	AR	TB2-34	

LEAD ELECTRICAL

COND IDENT	REMARKS	FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
C177		P12-162	32	WHT	26	AR	TB2-33	
C178	SEE NOTE 6	P12-163	32				TB2-32	SEE NOTE 6
C179		P12-164	32				TB2-31	
C180	SEE NOTE 5	J8-20	33				S13-2	SEE NOTE 5
C181		J8-21	33				S1-3	
C182		P12-165	32				TB2-30	
C183		-166					-29	
C184	SEE NOTE 6	-167					-28	SEE NOTE 6
C185		-168					-27	
C186		-169					-26	
C187		P12-170	32				TB2-25	
C188	SEE NOTE 5	J8-22	33				S14-2	SEE NOTE 5
C189		P12-190	32				TB2-16	
C190		-174					-24	
C191	SEE NOTE 6	-175					-23	SEE NOTE 6
C192		P12-176	32				TB2-22	
C193	SEE NOTE 5	J8-24	33				S15-2	SEE NOTE 5
C194		J8-25	33				S18-1	
C195		P12-196	32				TB2-12	
C196		-192					-14	
C197	SEE NOTE 6	-204					-7	SEE NOTE 6
C198		P12-182	32				TB2-20	
C199	SEE NOTE 5	J8-26	33				S16-2	SEE NOTE 5
C200		J8-27	33				S17-2	
C201		P12-185	32				TB2-19	
C202		-210					-1	
C203	SEE NOTE 6	-187					-17	SEE NOTE 6
C204		-196					-13	
C205		-181	32	WHT			TB2-21	
C206	SEE NOTE 6	-193	40	ORN			S6-5	
C207		P12-194	38	RED			S6-4	SEE NOTE 5
C208		J8-30	33	WHT			S18-2	
C209		P12-197	32	WHT			TB2-11	
C210		-209					-2	
C211		-191					-15	
C212		-201					-10	
C213	SEE NOTE 6	-202					-9	SEE NOTE 6
C214		-203					-8	
C215		-186					-18	
C216		-207					-6	
C217		-208	32	WHT			TB2-5	
C218		P12-179	33	WHT			S19-2	
C219		S1-1	35	YEL			S2-3	
C220		S2-1					S3-3	
C221		S3-1					S4-3	
C222		S4-1					S5-3	
C223		S6-1					S6-3	
C224		S6-1					S7-3	
C225		S7-1					S8-3	
C226		S8-1					S9-3	
C227		S9-1					S10-3	
C228		S10-1					S11-3	
C229		S11-1					S12-3	
C230		S12-1					S13-3	
C231		S13-1					S14-3	
C232		S14-1					S15-3	
C233		S15-1	35	YEL			S16-3	
C234	SEE NOTE 5	S17-4	38	RED			S5-4	
C235		S17-5	40	ORN			S5-5	
C236		S6-4	38	RED			S2-4	
C237		S6-5	40	ORN			S2-5	
C238		S2-4	38	RED			S7-4	
C239		S2-5	40	ORN			S7-5	SEE NOTE 5
C240		S7-4	38	RED			S3-4	
C241		S7-5	40	ORN			S3-5	
C242		S3-4	38	RED			S8-4	
C243		S3-5	40	ORN			S8-5	
C244		S8-4	38	RED			S9-4	
C245		S8-5	40	ORN			S9-5	
C246		S9-4	38	RED			S12-4	
C247		S9-5	40	ORN			S12-5	
C248		S12-4	38	RED			S15-4	
C249		S12-5	40	ORN			S15-5	
C250		S15-4	38	RED			S16-4	
C251		S15-5	40	ORN			S16-5	
C252		S16-4	38	RED			S13-4	
C253		S16-5	40	ORN			S13-5	
C254		S13-4	38	RED			S10-4	
C255		S13-5	40	ORN			S10-5	
C256		S10-4	38	RED			S11-4	
C257		S10-5	40	ORN			S11-5	
C258		S11-4	38	RED			S14-4	
C259		S11-5	40	ORN			S14-5	
C260		S14-4	38	RED			S17-4	
C261		S14-5	40	ORN			S17-5	
C262		S17-1	35	YEL			S18-3	
C263	SEE NOTE 6	P12-184	32	WHT			G2	SEE NOTE 6
C264	SEE NOTE 6	P12-183	41				G3	SEE NOTE 5
C265		P12-20	32				TBI-67	
C266	SEE NOTE 6	P12-8					TBI-82	SEE NOTE 6
C267		P12-173					TB2-4	
C268		P12-177					TB2-3	
C269		P12-19	32	WHT	26	AR	TBI-66	

QTY REQD	PART OR IDENTIFYING NO	MATERIAL OR NOTES	NOMENCLATURE OR DESCRIPTION	FIND NO.
			LIST OF MATERIALS	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. CAPACITOR VALUES ARE IN μf. RESISTOR VALUES ARE IN OHMS. TOLERANCES ON: FRACTIONS ±, DECIMALS ±, ANGLES ±. DO NOT SCALE THIS DRAWING.

MATERIAL

NEXT ASSY | USED ON | APPLICATION

MIT INSTRUMENTATION LAB, CAMBRIDGE, MASS.

MANNED SPACECRAFT CENTER, HOUSTON, TEXAS

DRAWN | CHECKED | APPROVED | APPROVED | APPROVED MIT | APPROVED MSC | DATE

FRONT HOUSING ASSEMBLY

AGC DSKY

CODE IDENT NO: 80230 | SIZE: J | DRAWING NO: 2003949 | SCALE: NONE | SHEET 3 OF 3

2003949 E

E 2 1 / 2

2003949 E

2003949

2003949 G

LTR	ZONE	DESCRIPTION	DR	CHK	DATE	APPROVED
A		REVISED PER TDRR 26856				
B		REVISED PER TDRR 27913				
C		REVISED PER TDRR 28178				
D		REVISED PER TDRR 29705				
E		REVISED PER TDRR 32580				
F		REVISED PER TDRR 33940				
G		REVISED PER TDRR 34492				

LEAD ELECTRICAL

FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
[illegible]	32	[illegible]	26	AR	TB2-64	
[illegible]					TB2-63	
[illegible]					TB2-62	
[illegible]					TB2-61	
[illegible]					TB2-68	
[illegible]					TB2-67	
[illegible]					TB2-66	
[illegible]					TB2-65	
[illegible]					TB2-72	
[illegible]					TB2-71	
[illegible]					TB2-70	
[illegible]					TB2-69	
[illegible]					TB2-76	
[illegible]					TB2-75	
[illegible]					TB2-74	
[illegible]					TB2-73	
[illegible]					TB2-80	
[illegible]					TB2-79	
[illegible]					TB2-78	
[illegible]					TB2-77	
[illegible]					TB2-84	
[illegible]					TB2-83	
[illegible]					TB2-82	
[illegible]					TB2-81	
[illegible]					TB2-88	
[illegible]					TB2-87	
[illegible]					TB2-86	
[illegible]					TB2-85	
[illegible]					TB2-92	
[illegible]					TB2-91	
[illegible]					TB2-90	
[illegible]					TB2-89	
[illegible]					TB2-96	
[illegible]					TB2-95	
[illegible]					TB2-94	
[illegible]					TB2-93	
[illegible]					TB2-100	
[illegible]					TB2-99	
[illegible]					TB2-98	
[illegible]					TB2-97	
[illegible]					TB1-1	
[illegible]					TB2-103	
[illegible]					TB2-102	
[illegible]					TB2-101	SEE NOTE 6
[illegible]					TB1-5	
[illegible]					TB1-4	
[illegible]					TB1-3	
[illegible]					TB1-2	
[illegible]					TB1-9	
[illegible]					TB1-8	
[illegible]					TB1-7	
[illegible]					TB1-6	
[illegible]					TB1-13	
[illegible]					TB1-12	
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[illegible]					TB1-10	
[illegible]					TB1-19	
[illegible]					TB1-18	
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[illegible]					TB1-16	
[illegible]					TB1-15	
[illegible]					TB1-14	
[illegible]					TB1-25	
[illegible]					TB1-24	
[illegible]					TB1-23	
[illegible]					TB1-22	
[illegible]					TB1-21	
[illegible]					TB1-20	
[illegible]					TB1-31	
[illegible]					TB1-30	
[illegible]					TB1-29	
[illegible]					TB1-28	
[illegible]					TB1-27	
[illegible]					TB1-26	
[illegible]					TB1-37	
[illegible]					TB1-36	
[illegible]					TB1-35	
[illegible]					TB1-34	
[illegible]					TB1-33	
[illegible]					TB1-32	
[illegible]					TB1-42	
[illegible]					TB1-41	
[illegible]					TB1-40	
[illegible]					TB1-39	
[illegible]					TB1-38	
[illegible]					TB1-48	
[illegible]					TB1-47	
[illegible]	32	WHT	26	AR	TB1-46	

LEAD ELECTRICAL

COND IDENT	REMARKS	FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
C89		P12-46	32	WHT	26	AR	TB1-45	
C90		-47					TB1-44	
C91		-48					TB1-43	
C92		-37					TB1-54	
C93		-38					TB1-53	
C94		-39					TB1-52	
C95		-40					TB1-51	
C96		-41					TB1-50	
C97		-42					TB1-49	
C98		-31					TB1-60	
C99		-32					TB1-59	
C100		-33					TB1-58	
C101		-34					TB1-57	
C102		-35					TB1-56	
C103		-36					TB1-57	
C104		-25					TB1-65	
C105		-27					TB1-64	
C106	SEE NOTE 6	-28					TB1-63	SEE NOTE 6
C107		-29					TB1-62	
C108		-30					TB1-61	
C109		-21					TB1-71	
C110		-22					TB1-70	
C111		-23					TB1-69	
C112		-24					TB1-68	
C113		-13					TB1-76	
C114		-15					TB1-75	
C115		-16					TB1-74	
C116		-17					TB1-73	
C117		-18					TB1-72	
C118		-7					TB1-81	
C119		-9					TB1-80	
C120		-10					TB1-79	
C121		-11					TB1-78	
C122		-12					TB1-77	
C123		-1					TB1-87	
C124		-3					TB1-86	
C125		-4					TB1-85	
C126		-5					TB1-84	
C127		P12-6	32	WHT			TB1-83	
C128		S16-1	35	YEL			S17-3	
C129		S5-4	38	RED			S19-4	
C130		S5-5	40	ORN			S19-5	
C131		S19-4	38	RED			S1-4	
C132		S19-5	40	ORN			S1-5	
C133		S1-4	38	RED			S18-4	
C134		S1-5	40	ORN			S18-5	
C135	SEE NOTE 5	S18-4	38	RED			S4-4	SEE NOTE 5
C136		S18-5	40	ORN			S4-5	
C137		J8-3	33	WHT			S2-2	
C138		-5					S1-2	
C139		-8					S3-2	
C140		-9					S19-3	
C141		-10					S4-2	
C142		-11					S10-2	
C143		J8-13	33				S5-2	
C144		P12-135	32				TB2-60	
C145		-136					TB2-59	
C146	SEE NOTE 6	-137					TB2-58	
C147		-138					TB2-57	SEE NOTE 6
C148		-139					TB2-56	
C149		P12-140	32				TB2-55	
C150	SEE NOTE 5	J8-14	33				S12-2	SEE NOTE 5
C151		J8-15	33				S6-2	
C152		P12-141	32				TB2-54	
C153		-142					TB2-53	
C154	SEE NOTE 6	-143					TB2-52	SEE NOTE 6
C155		-144					TB2-51	
C156		-145					TB2-50	
C157		P12-146	32				TB2-49	
C158	SEE NOTE 5	J8-16	33				S7-2	SEE NOTE 5
C159		J8-17	33				S9-2	
C160		P12-147	32				TB2-48	
C161		-148					-47	
C162		-149					-46	
C163		-150					-45	
C164		-151					-44	
C165	SEE NOTE 6	-152					-43	
C166		-153					-42	SEE NOTE 6
C167		-154					-41	
C168		-155					-40	
C169		-156					-39	
C170		-157					-38	
C171		P12-158	32				TB2-37	
C172	SEE NOTE 5	J8-18	33				S11-2	SEE NOTE 5
C173		J8-19	33				S8-2	
C174		P12-159	32				TB2-36	
C175	SEE NOTE 6	P12-160	32				TB2-35	SEE NOTE 6
C176		P12-161	32	WHT	26	AR	TB2-34	

LEAD ELECTRICAL

COND IDENT	REMARKS	FROM	FIND NO.	COLOR	SIZE AWG	LENGTH	TO	REMARKS
C177		P12-162	32	WHT	26	AR	TB2-33	
C178	SEE NOTE 6	P12-163	32				TB2-32	SEE NOTE 6
C179		P12-164	32				TB2-31	
C180	SEE NOTE 5	J8-20	33				S13-2	SEE NOTE 5
C181		J8-21	33				S1-3	
C182		P12-165	32				TB2-30	
C183		-166					-29	
C184	SEE NOTE 6	-167					-28	SEE NOTE 6
C185		-168					-27	
C186		-169					-26	
C187		P12-170	32				TB2-25	
C188	SEE NOTE 5	J8-22	33				S14-2	SEE NOTE 5
C189		P12-190	32				TB2-16	
C190		-174					-24	
C191	SEE NOTE 6	-175					-23	SEE NOTE 6
C192		P12-176	32				TB2-22	
C193	SEE NOTE 5	J8-24	33				S15-2	SEE NOTE 5
C194		J8-25	33				S18-1	
C195		P12-196	32				TB2-12	
C196	SEE NOTE 6	-192					-14	SEE NOTE 6
C197		-204					-7	
C198		P12-182	32				TB2-20	
C199	SEE NOTE 5	J8-26	33				S16-2	SEE NOTE 5
C200		J8-27	33				S17-2	
C201		P12-185	32				TB2-19	
C202		-210					-1	
C203	SEE NOTE 6	-187					-17	SEE NOTE 6
C204		-195					-13	
C205		-181	32	WHT			TB2-21	
C206	SEE NOTE 5	-193	40	ORN			S6-5	
C207		P12-194	38	RED			S6-4	SEE NOTE 5
C208		J8-30	33	WHT			S18-2	
C209		P12-197	32	WHT			TB2-11	
C210		-209					-2	
C211		-191					-15	
C212		-201					-10	
C213	SEE NOTE 6	-202					-9	SEE NOTE 6
C214		-203					-8	
C215		-186					-18	
C216		-207					-6	
C217		-208	32	WHT			TB2-5	
C218		P12-179	33	WHT			S19-2	
C219		S1-1	35	YEL			S2-3	
C220		S2-1					S3-3	
C221		S3-1					S4-3	
C222		S4-1					S5-3	
C223		S5-1					S6-3	
C224		S6-1					S7-3	
C225		S7-1					S8-3	
C226		S8-1					S9-3	
C227		S9-1					S10-3	
C228		S10-1					S11-3	
C229		S11-1					S12-3	
C230		S12-1					S13-3	
C231		S13-1					S14-3	
C232		S14-1					S15-3	
C233		S15-1	35	YEL			S16-3	
C234	SEE NOTE 5	S17-4	38	RED			S5-4	
C235		S17-5	40	ORN			S5-5	
C236		S6-4	38	RED			S2-4	
C237		S6-5	40	ORN			S2-5	
C238		S2-4	38	RED			S7-4	
C239		S2-5	40	ORN			S7-5	SEE NOTE 5
C240		S7-4	38	RED			S3-4	
C241		S7-5	40	ORN			S3-5	
C242		S3-4	38	RED			S8-4	
C243		S3-5	40	ORN			S8-5	
C244		S8-4	38	RED			S9-4	
C245		S8-5	40	ORN			S9-5	
C246		S9-4	38	RED			S12-4	
C247		S9-5	40	ORN			S12-5	
C248		S12-4	38	RED			S15-4	
C249		S12-5	40	ORN			S15-5	
C250		S15-4	38	RED			S16-4	
C251		S15-5	40	ORN			S16-5	
C252		S16-4	38	RED			S13-4	
C253		S16-5	40	ORN			S13-5	
C254		S13-4	38	RED			S10-4	
C255		S13-5	40	ORN			S10-5	
C256		S10-4	38	RED			S11-4	
C257		S10-5	40	ORN			S11-5	
C258		S11-4	38	RED			S14-4	
C259		S11-5	40	ORN			S14-5	
C260		S14-4	38	RED			S17-4	
C261		S14-5	40	ORN			S17-5	
C262		S17-1	35	YEL			S18-3	
C263	SEE NOTE 6	P12-184	32	WHT			62	SEE NOTE 6
C264	SEE NOTE 6	P12-183	41				63	SEE NOTE 5
C265		P12-20	32				TB1-67	
C266	SEE NOTE 6	P12-8					TB1-82	SEE NOTE 6
C267		P12-173					TB2-4	
C268		P12-177					TB2-3	
C269		P12-19	32	WHT	26	AR	TB1-66	

MASTER

QTY REQD	PART OR IDENTIFYING NO.	MATERIAL OR NOTES	NOMENCLATURE OR DESCRIPTION	FIND NO.

LIST OF MATERIALS

NEXT ASSY	USED ON

APPLICATION

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
CAPACITOR VALUES ARE IN µf
RESISTOR VALUES ARE IN OHMS
TOLERANCES ON
FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL

MIT INSTRUMENTATION LAB
CAMBRIDGE, MASS.

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

DRAWN
CHECKED
APPROVED
APPROVED
APPROVED MIT
APPROVED MSC — A. C. [illegible]
DATE

FRONT HOUSING ASSEMBLY
AGC DSKY

CODE IDENT NO	SIZE	DRAWING NO
80230	J	2003949

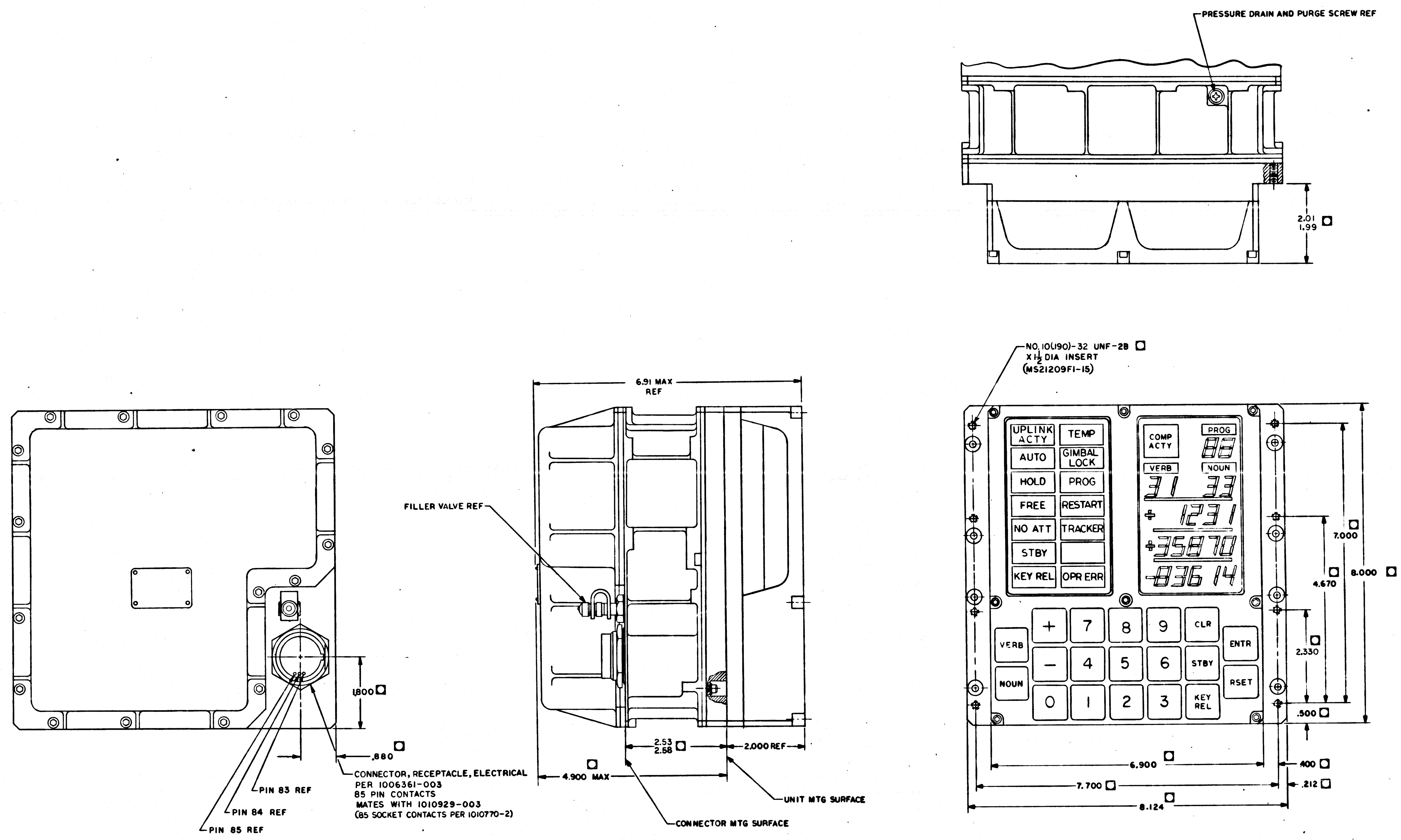
SCALE NONE — SHEET 3 OF 3

2003949 G

2003949

12/22 2003949 G

2003956



NOTES
1. ☐ DIMENSIONS CONTROLLED BY ICD MH01-01305-116
2. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
3. WEIGHT *Later*
4. ⊕ INDICATES CENTER OF GRAVITY *Locate later*

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS DECIMALS ANGLES
±.005
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION

LIST OF MATERIALS

MIT INSTRUMENTATION LAB
CAMBRIDGE MASS

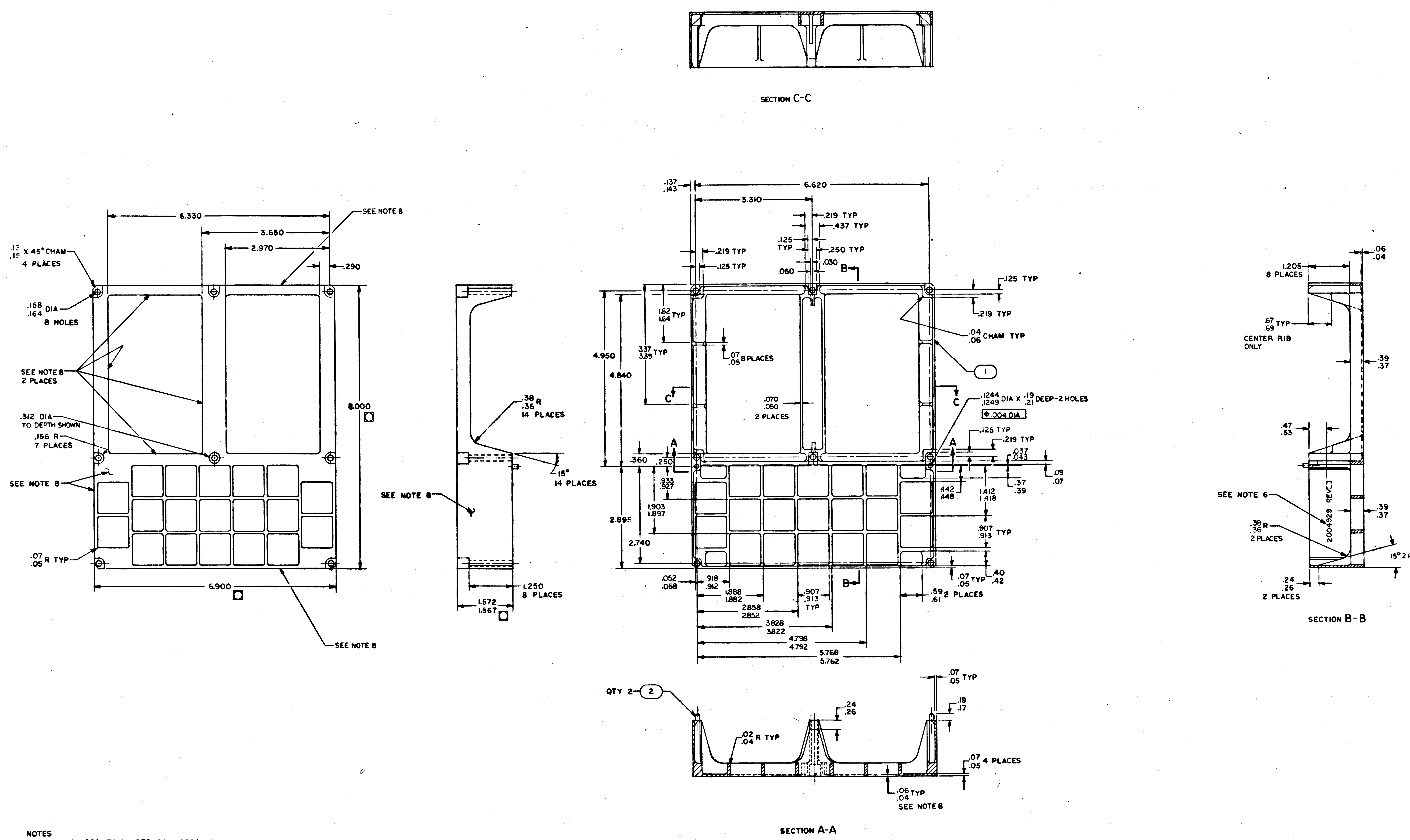
DRAWN *R. D. Zankel* DATE
CHECKED
APPROVAL
APPROVAL
NASA APPROVAL
MIT APPROVAL

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

AGC DSKY
OUTLINE DRAWING

CODE IDENT NO 80230
SIZE
NASA DRAWING NO 2003956
SCALE 1/1
WT

2003956



NOTES
1. MATL:6061-T6-AL PER QQ-A-250/11,TEMP6
2. REMOVE BURRS AND SHARP EDGES.005/.015
3. ALL SURFACES 125/
4. CHROMATE PER MIL-C-5541,TYPE II,GRADE C,CLASS B
5. UNLESS OTHERWISE SPECIFIED ALL FILLETS AND RADII TO BE .09 R MAX
6. MARK.10/.14 HIGH BLACK CHARACTERS PER ND1002019 AND ND1002122, TYPE II, CLASS 2 USING INK 1006271-10
7. ◯ DIMENSIONS CONTROLLED BY ICD MH01
8. ◯ PAINT INDICATED SURFACES WITH 1010729-1 MED GRAY EPOXY ENAMEL PER ND1002110
9. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION
2	MS16555-625	PIN, DOWEL
1	2004929-001	COVER, FRONT

LIST OF MATERIALS

NEXT ASSY	USED ON
2003900	

APPLICATION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± DECIMALS ±.005 ANGLES ±2°

DO NOT SCALE THIS DRAWING

MATERIAL: SEE NOTE 1

HEAT TREATMENT: NONE

FINAL FINISH: SEE NOTES 4 & 8

MIT INSTRUMENTATION LAB, CAMBRIDGE, MASS.

DRAWN / CHECKED / APPROVAL / APPROVAL / NASA APPROVAL / MIT APPROVAL / MIT APPROVAL

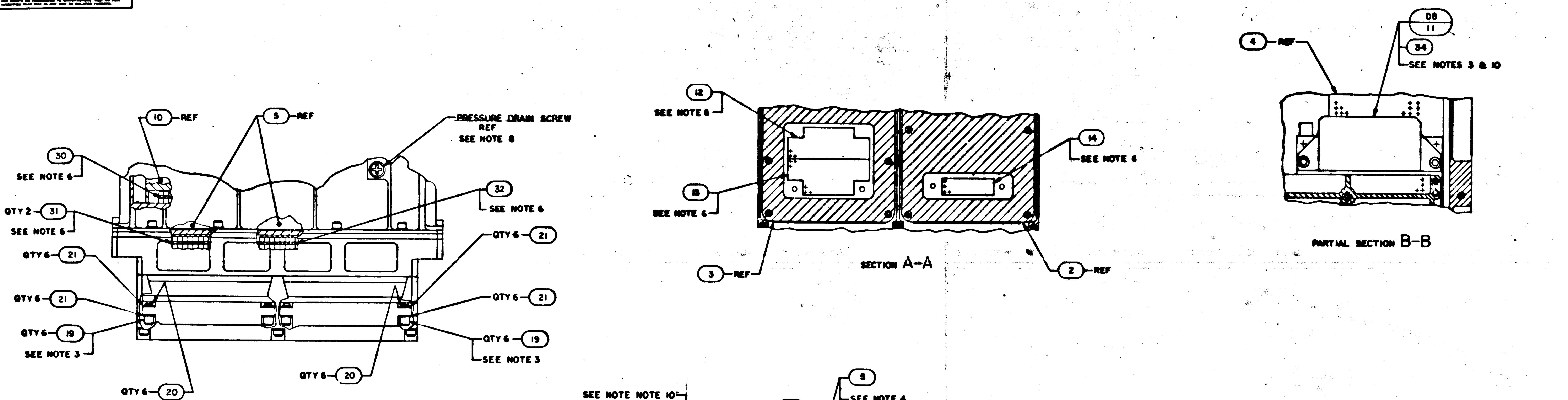
MANNED SPACECRAFT CENTER, HOUSTON, TEXAS

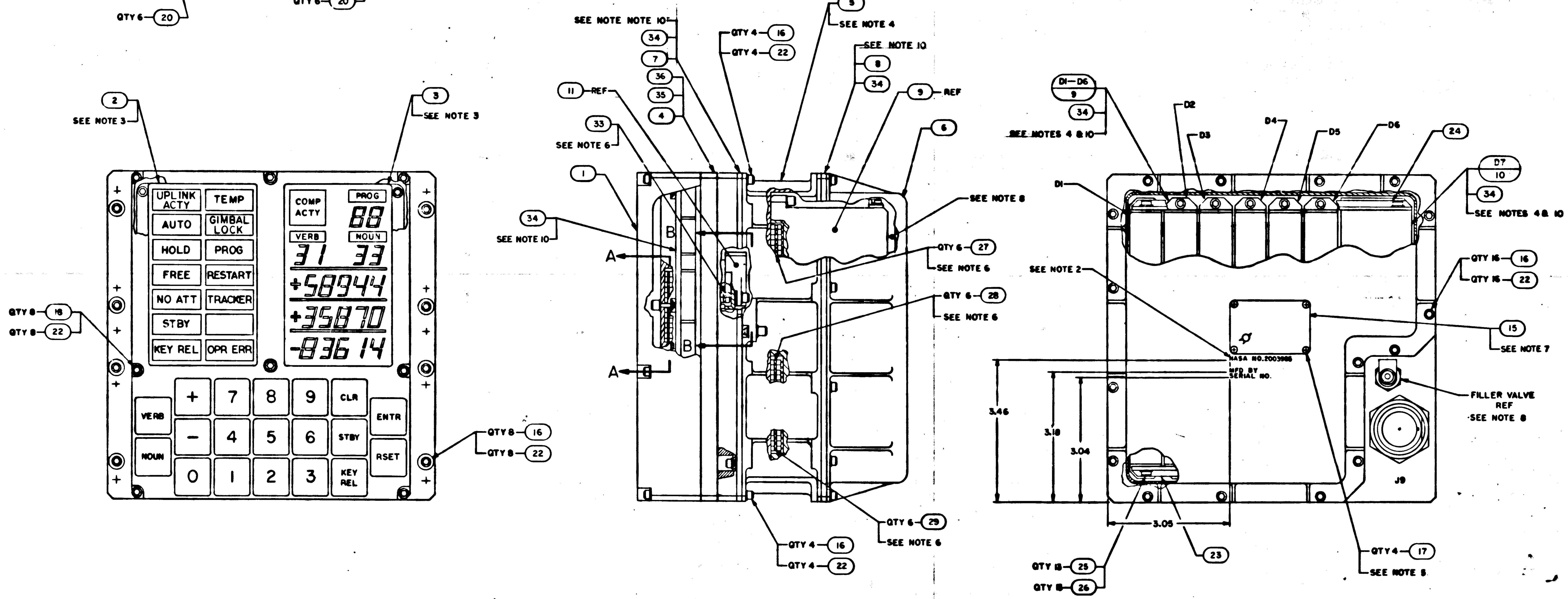
COVER, FRONT
AGC DSKY

CODE IDENT NO. 80230 | SIZE J | NASA DRAWING NO. 2004929

SCALE 1/1 | WT

2003985	A		
A	REVISED PER TDRR 22462 DR. CHK. APPD.		





QTY REQD 031	QTY REQD 021	QTY REQD 011	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
			2003956	OUTLINE DRAWING	REF
			2005957	SIGNAL PIN ASSIGNMENT	REF
			2005951	INTERCONNECTING DIAGRAM	REF
			2005950	SIGNAL FLOW DIAGRAM	REF
1	—	—	2003903-031	FRONT HOUSING ASSY	36
—	1	—	2003903-021	FRONT HOUSING ASSY	35
AR	AR	AR	1006879	SILICONE COMPOUND	34
1	1	1	2004955-005	GASKET	33
1	1	1	2004955-008	GASKET	32
2	2	2	2004955-007	GASKET	31
1	1	1	2004955-006	GASKET	30
6	6	6	2004955-003	GASKET	29
6	6	6	2004955-002	GASKET	28
6	6	6	2004955-004	GASKET	27
13	13	13	MS16995-10	SCREW, HEX SOCKET HEAD	26
13	13	13	NAS620C4	WASHER, FLAT	25
1	1	1	2004958	BRACKET, MODULE	24
1	1	1	2004959	BRACKET, MODULE	23
40	40	40	NAS620C6	WASHER, FLAT	22
24	24	24	1004546-4	WASHER, FLAT	21
12	12	12	MS16633-4014	RING, RETAINING	20
12	12	12	2004932-001	SCREW, JACKING	19
8	8	8	1001489-59	SCREW, HEX SOCKET HEAD	18
4	4	4	MS35216-1	SCREW, PAN HEAD, CROSS RECESSED	17
32	32	32	MS16995-18	SCREW, CAP, SOCKET HEAD	16
1	1	1	1004260-20	NAMEPLATE	15
1	1	1	2004955-001	GASKET	14
1	1	1	2004953-002	GASKET	13
1	1	1	2004953-001	GASKET	12
1	1	1	2003909-011	KEYBOARD MODULE ASSY D8	11
1	1	1	2003901-011	POWER SUPPLY ASSY MODULE D7	10
6	6	6	2003902-011	INDICATOR DRIVER MODULE D1-6	9
1	1	1	1006349	GASKET, BONDED, RUBBER	8
1	1	1	1006350	GASKET, BONDED, RUBBER	7
1	1	1	2004900	COVER, REAR	6
1	1	1	2003954-011	MAIN HOUSING ASSY	5
—	—	1	2003903-011	FRONT HOUSING ASSY	4
1	1	1	1006315	INDICATOR, DIGITAL	3
1	1	1	1006316	INDICATOR, ALARM	2
1	1	1	2004929-011	COVER, FRONT	1

LIST OF MATERIALS

NOTES

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MARK .10/.08 HIGH BLACK CHARACTERS PER ND1002019 AND ND1002122, TYPE II, CLASS 2 AND SERIALIZE PER ND1002023 USING INK 1006271-11
3. MOUNTING TORQUE FOR FIND NO. 19 AND JACK SCREWS OF FIND NO. 11 TO BE 7-10 INCH POUNDS
4. MOUNTING TORQUE FOR JACK SCREWS OF FIND NO. 5, 9 & 10 TO BE 15-19 INCH POUNDS
5. APPLY SEALING COMPOUND MIL-S-22473 GRADE H TO FIND NO. 17
6. BOND FIND NO. 12, 13 TO FIND NO. 3, FIND NO. 14 TO FIND NO. 2, FIND NO. 27, 28, 29 TO FIND NO. 9, FIND NO. 30 TO FIND NO. 10, FIND NO. 31, 32 TO FIND NO. 5, FIND NO. 33 TO FIND NO. 11 PER ND1002237
7. STAMP CHARACTERS PER ND1002019 AND SERIALIZE PER ND1002123
8. FILL WITH A MINIMUM OF 87% NITROGEN AND 8.7% HELIUM AND A MAXIMUM OF 4.3% AIR TO 1.05/1.10 ATMOSPHERES. DO NOT EXCEED 2 ATMOSPHERES DURING PRESSURIZATION
9. COMPLETED ASSEMBLY SHALL BE TESTED IN ACCORDANCE WITH AND SHALL MEET ALL THE REQUIREMENTS OF PS2003985
10. APPLY FIND NO. 34 TO MATING SURFACES OF FIND NO. 4, 7, 8, 9, 10 AND 11 DO NOT APPLY TO BONDED BUBBER OF FIND NO. 4, 7, AND 8
11. AR DENOTES AS REQUIRED

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± DECIMALS ±.02 ANGLES ±

DO NOT SCALE THIS DRAWING

MATERIAL

HEAT TREATMENT

FINAL FINISH

NEXT ASSY | USED ON

APPLICATION

M I T INSTRUMENTATION LAB CAMBRIDGE MASS

DRAWN A. Vocca DATE

CHECKED R. Edwards

APPROVAL

NASA APPROVAL

MIT APPROVAL

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

AGC DSKY ASSEMBLY

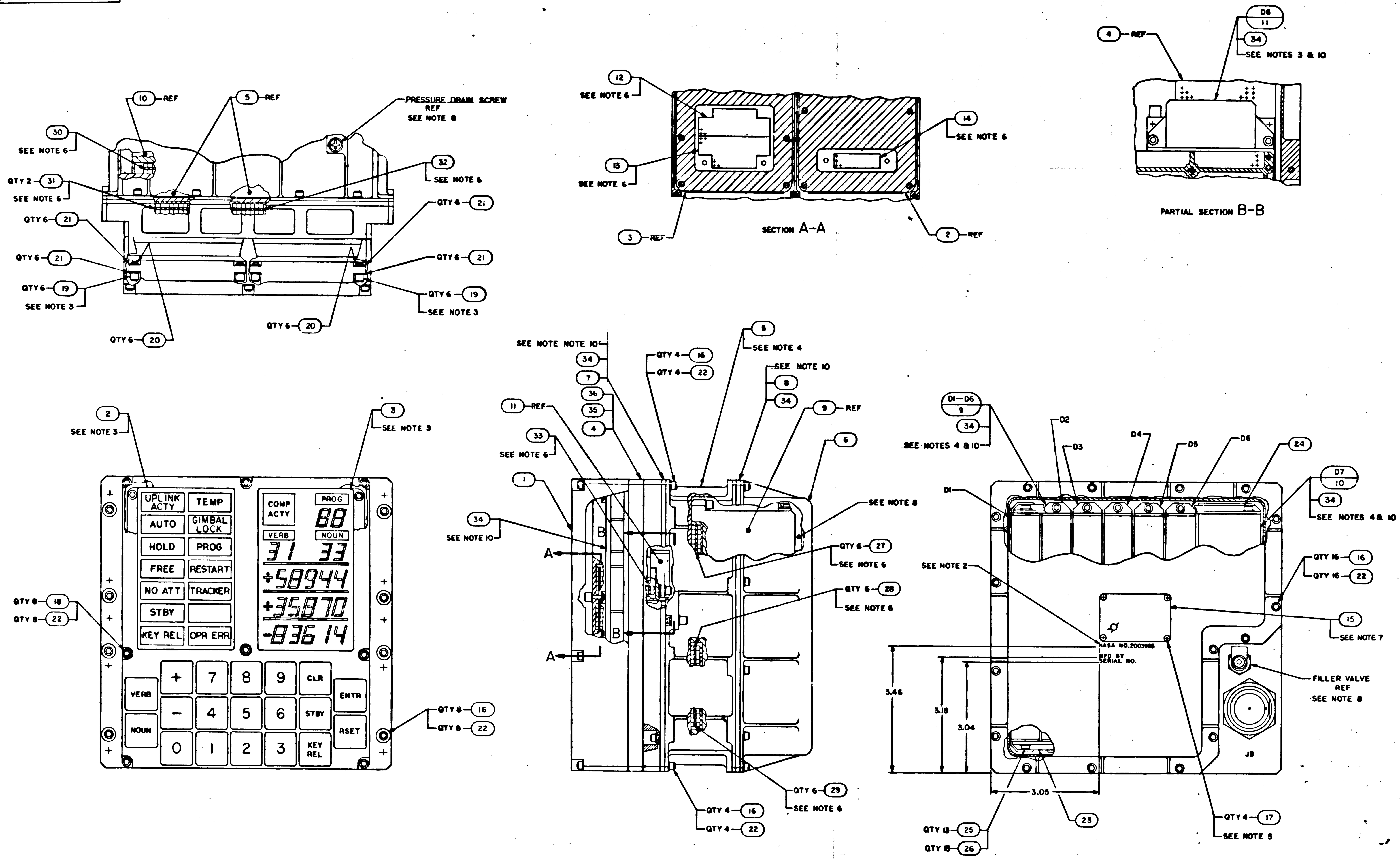
CODE IDENT NO 80230 | SIZE J | NASA DRAWING NO 2003985

SCALE 1/1 | SHEET 1 OF 1

2003985 | A

2003985 B

SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 22462 DR. CHK. APPD.		
B	REVISED PER TDRR 23637 DR CHK		



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			2005957	SIGNAL PIN ASSIGNMENT	REF
			2005951	INTERCONNECTING DIAGRAM	REF
			2005950	SIGNAL FLOW DIAGRAM	REF
1	—	—	2003903-031	FRONT HOUSING ASSY	36
—	1	—	2003903-021	FRONT HOUSING ASSY	35
AR	AR	AR	1006879	SILICONE COMPOUND	34
1	1	1	2004955-005	GASKET	33
1	1	1	2004955-008	GASKET	32
2	2	2	2004955-007	GASKET	31
1	1	1	2004955-006	GASKET	30
6	6	6	2004955-003	GASKET	29
6	6	6	2004955-002	GASKET	28
6	6	6	2004955-004	GASKET	27
13	13	13	MS16995-10	SCREW, HEX SOCKET HEAD	26
13	13	13	NAS620C4	WASHER, FLAT	25
1	1	1	2004958	BRACKET, MODULE	24
1	1	1	2004959	BRACKET, MODULE	23
40	40	40	NAS620C6	WASHER, FLAT	22
24	24	24	1004546-4	WASHER, FLAT	21
12	12	12	MS16633-4014	RING, RETAINING	20
12	12	12	2004932-001	SCREW, JACKING	19
8	8	8	1001489-59	SCREW, HEX SOCKET HEAD	18
4	4	4	MS35216-1	SCREW, PAN HEAD, CROSS RECESSED	17
32	32	32	MS16995-18	SCREW, CAP, SOCKET HEAD	16
1	1	1	1004260-20	NAMEPLATE	15
1	1	1	2004955-001	GASKET	14
1	1	1	2004953-002	GASKET	13
1	1	1	2004953-001	GASKET	12
1	1	1	2003909-011	KEYBOARD MODULE ASSY D8	11
1	1	1	2003901-011	POWER SUPPLY ASSY MODULE D7	10
6	6	6	2003902-011	INDICATOR DRIVER MODULE D1-D6	9
1	1	1	1006349	GASKET, BONDED, RUBBER	8
1	1	1	1006350	GASKET, BONDED, RUBBER	7
1	1	1	2004900	COVER, REAR	6
1	1	1	2003954-011	MAIN HOUSING ASSY	5
—	—	1	2003903-011	FRONT HOUSING ASSY	4
1	1	1	2004935	INDICATOR, DIGITAL	3
1	1	1	1006316	INDICATOR, ALARM	2
1	1	1	2004929-011	COVER, FRONT	1
QTY REQD	QTY REQD	QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
031	021	011	LIST OF MATERIALS		

NOTES

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MARK .10/.08 HIGH BLACK CHARACTERS PER ND1002019 AND ND1002122, TYPE II, CLASS 2 AND SERIALIZE PER ND1002023 USING INK 1006271-11
3. MOUNTING TORQUE FOR FIND NO. 19 AND JACK SCREWS OF FIND NO. 11 TO BE 7-10 INCH POUNDS
4. MOUNTING TORQUE FOR JACK SCREWS OF FIND NO. 5, 9 & 10 TO BE 15-19 INCH POUNDS
5. APPLY SEALING COMPOUND MIL-S-22473 GRADE H TO FIND NO.17
6. BOND FIND NO. 12, 13 TO FIND NO.3, FIND NO. 14 TO FIND NO.2, FIND NO.27,28,29 TO FIND NO. 9, FIND NO.30 TO FIND NO.10, FIND NO.31,32 TO FIND NO.5, FIND NO.33 TO FIND NO.11 PER ND1002237
7. STAMP CHARACTERS PER ND1002019 AND SERIALIZE PER ND1002023
8. FILL WITH A MINIMUM OF 87% NITROGEN AND 8.7% HELIUM AND A MAXIMUM OF 4.3% AIR TO 1.05/1.10 ATMOSPHERES. DO NOT EXCEED 2 ATMOSPHERES DURING PRESSURIZATION
9. COMPLETED ASSEMBLY SHALL BE TESTED IN ACCORDANCE WITH AND SHALL MEET ALL THE REQUIREMENTS OF PS2003985
10. APPLY FIND NO. 34 TO MATING SURFACES OF FIND NO.4,7,8,9,10 AND 11 DO NOT APPLY TO BONDED BUBBER OF FIND NO.4, 7, AND 8
11. AR DENOTES AS REQUIRED

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS - DECIMALS ±.02 ANGLES -
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH

MIT INSTRUMENTATION LAB CAMBRIDGE MASS
DRAWN DATE
CHECKED
APPROVAL
APPROVAL
NASA APPROVAL
MIT APPROVAL

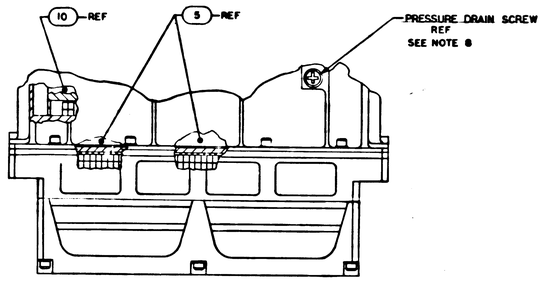
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

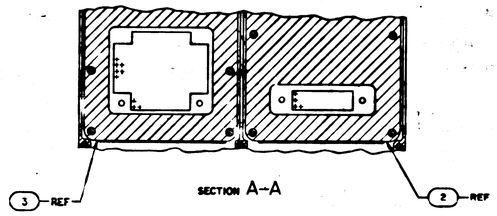
AGC DSKY ASSEMBLY

CODE IDENT NO. 80230 | SIZE J | NASA DRAWING NO. 2003985
SCALE 1/1 | WT | SHEET 1 OF 1

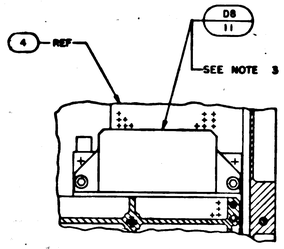
2003985 B

ZONE	REVISIONS per 70443		
	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 22462 DR W. Penn CHK [illegible] APPD [illegible]	[illegible]	[illegible]
B	REVISED PER TDRR 23637 DR E. Gilroy CHK [illegible] APPD [illegible]	7/17/67	[illegible]
C	REVISED PER TDRR 24214 DR R.B. Bryan CHK [illegible] APPD [illegible]	12/14/67	[illegible]

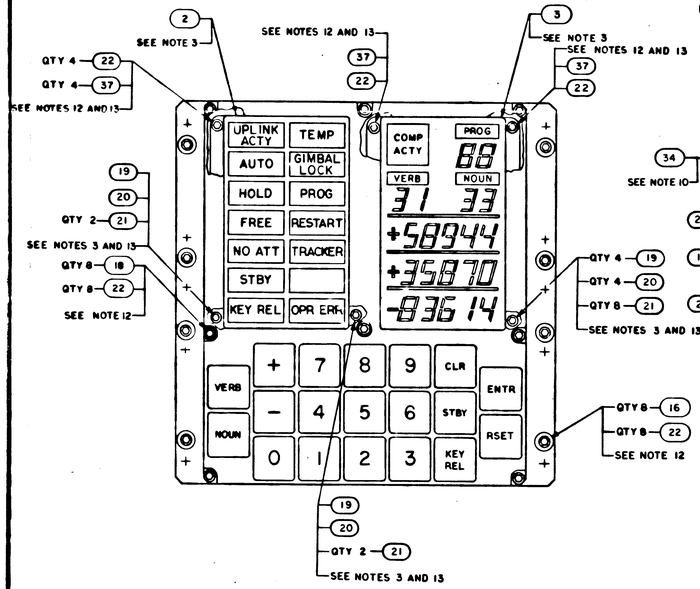


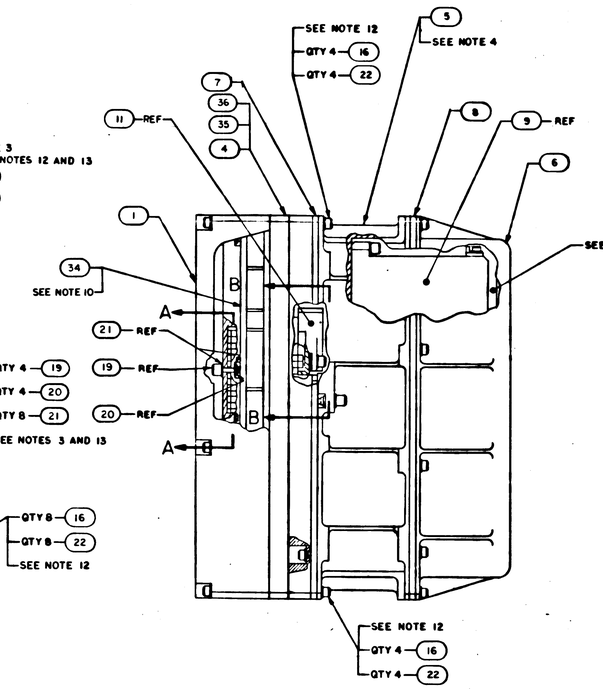


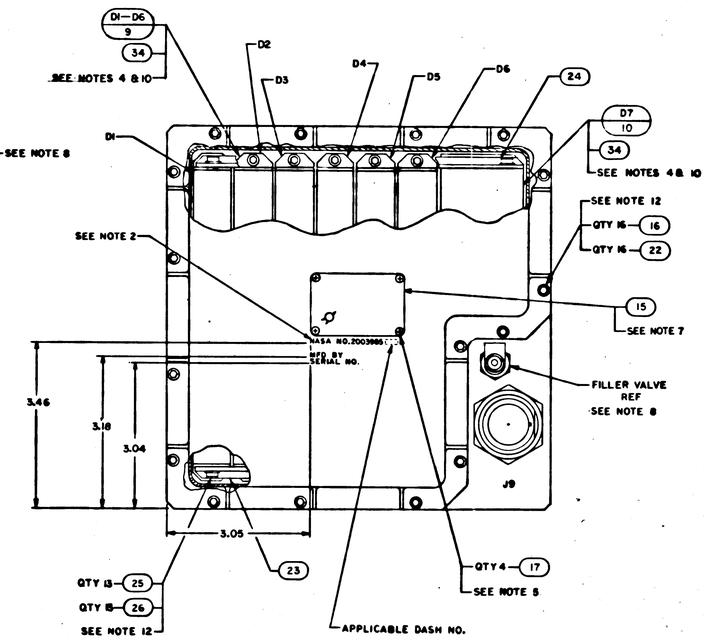
SECTION A-A



PARTIAL SECTION B-B







NOTES

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MARK IQ/08 HIGH WHITE CHARACTERS PER ND1002019 AND ND1002122, TYPE II, CLASS 2 AND SERIALIZE PER ND1002023 USING INK 1006271-1
3. MOUNTING TORQUE FOR FIND NO. 19 AND JACK SCREWS OF FIND NO. 11 TO BE 7-10 INCH POUNDS
4. MOUNTING TORQUE FOR JACK SCREWS OF FIND NO. 5,9 & 10 TO BE 15-19 INCH POUNDS
5. APPLY SEALING COMPOUND MIL-S-22473 GRADE H TO FIND NO.17
6. ~~BOND FIND NO. 1,13 TO FIND NO. 3, FIND NO. 14 TO FIND NO. 2, FIND NO. 27,28,29 TO FIND NO. 9, FIND NO. 30 TO FIND NO. 10, FIND NO. 31,32 TO FIND NO. 5, FIND NO. 33 TO FIND NO. 11 PER ND1002232~~
7. STAMP CHARACTERS PER ND1002019 AND SERIALIZE PER ND1002023
8. FILL WITH A MINIMUM OF 87% NITROGEN AND 8.7% HELIUM AND A MAXIMUM OF 4.3% AIR TO .75/1.10 ATMOSPHERES. DO NOT EXCEED 2 ATMOSPHERES DURING PRESSURIZATION
9. COMPLETED ASSEMBLY SHALL BE TESTED IN ACCORDANCE WITH AND SHALL MEET ALL THE REQUIREMENTS OF PS2003985
10. APPLY FIND NO. 34 TO MATING SURFACES OF FIND NO. 4,9 AND 10
    DO NOT APPLY TO BONDED RUBBER OF FIND NO. 4,
11. AR DENOTES AS REQUIRED
12. MOUNTING TORQUE FOR FIND NO. 16 AND 37 TO BE 8-9 INCH POUNDS
    MOUNTING TORQUE FOR FIND NO. 18 AND 26 TO BE 3.5 -4.5 INCH POUNDS
13. FIND NO. 2 AND 3 TO BE ASSEMBLE TO HEIGHT OF BONDED RUBBER OF FIND NO 4, 35 OR 36 USING FIND NO. 19, BEFORE INSTALLING FIND NO. 37

QTY REQD	QTY REQD	QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
				LIST OF MATERIALS	
			2003956	OUTLINE DRAWING	REF
			2005957	SIGNAL PIN ASSIGNMENT	REF
			2005951	INTERCONNECTING DIAGRAM	REF
			2005950	SIGNAL FLOW DIAGRAM	REF
6	6	6	MS16995-20	SCREW, CAP, SOCKET HEAD	37
1	—	—	2003903-031	FRONT HOUSING ASSY	36
—	1	—	2003903-021	FRONT HOUSING ASSY	35
AR	AR	AR	1006879	SILICONE COMPOUND	34
1	1	1	2004933-003	GASKET	33
1	1	1	2004933-008	GASKET	32
2	2	2	2004933-007	GASKET	31
1	1	1	2004933-006	GASKET	30
6	6	6	2004958-003	GASKET	29
6	6	6	2004958-002	GASKET	28
6	6	6	2004958-004	GASKET	27
13	13	13	MS16995-10	SCREW, HEX SOCKET HEAD	26
13	13	13	NAS620C4	WASHER, FLAT	25
1	1	1	2004958	BRACKET, MODULE	24
1	1	1	2004959	BRACKET, MODULE	23
46	46	46	NAS620C6	WASHER, FLAT	22
18	18	18	1004546-4	WASHER, FLAT	21
6	6	6	MS16633-4014	RING, RETAINING	20
6	6	6	2004932-001	SCREW, JACKING	19
8	8	8	1001489-59	SCREW, HEX SOCKET HEAD	18
4	4	4	MS35216-1	SCREW, PAN HEAD, CROSS RECESSED	17
32	32	32	MS16995-18	SCREW, CAP, SOCKET HEAD	16
1	1	1	1004260-20	NAMEPLATE	15
1	1	1	2004955-001	GASKET	14
1	1	1	2004955-002	GASKET	13
1	1	1	2004955-001	GASKET	12
1	1	1	2003909-011	KEYBOARD MODULE ASSY D8	11
1	1	1	2003901-011	POWER SUPPLY ASSY MODULE D7	10
6	6	6	2003902-011	INDICATOR DRIVER MODULE D1-D6	9
1	1	1	1006349	GASKET, BONDED, RUBBER	8
1	1	1	1006350	GASKET, BONDED, RUBBER	7
1	1	1	2004900	COVER, REAR	6
1	1	1	2003954-011	MAIN HOUSING ASSY	5
—	—	1	2003903-011	FRONT HOUSING ASSY	4
1	1	1	2004935	INDICATOR, DIGITAL	3
1	1	1	1006316	INDICATOR, ALARM	2
1	1	1	2004929-011	COVER, FRONT	1

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS DECIMALS ANGLES ±.02
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINISH
NEXT ASSY | USED ON
APPLICATION

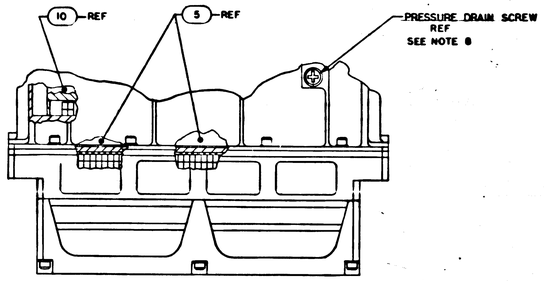
M.I.T. INSTRUMENTATION LAB Cambridge, Mass.
DRWN R. Ellis DATE 2-2-67
CHK'D R. Edwards 12/14/67
APPROVAL [illegible]
APPROVAL Peter Sewell 12/14/67
NASA APPROVAL [illegible]
MIT APPROVAL [illegible]

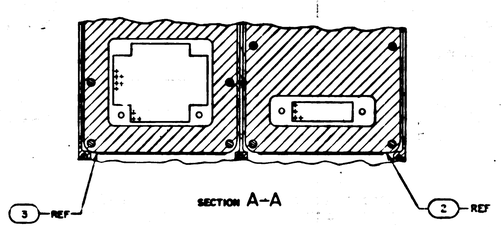
MANNED SPACECRAFT CENTER HOUSTON, TEXAS

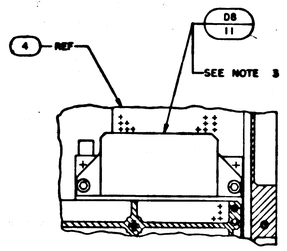
AGC DSKY ASSEMBLY

CODE IDENT NO. 80230 | SIZE J | NASA DRAWING NO. 2003985
SCALE 1/1 | WT | SHEET 1 OF 1

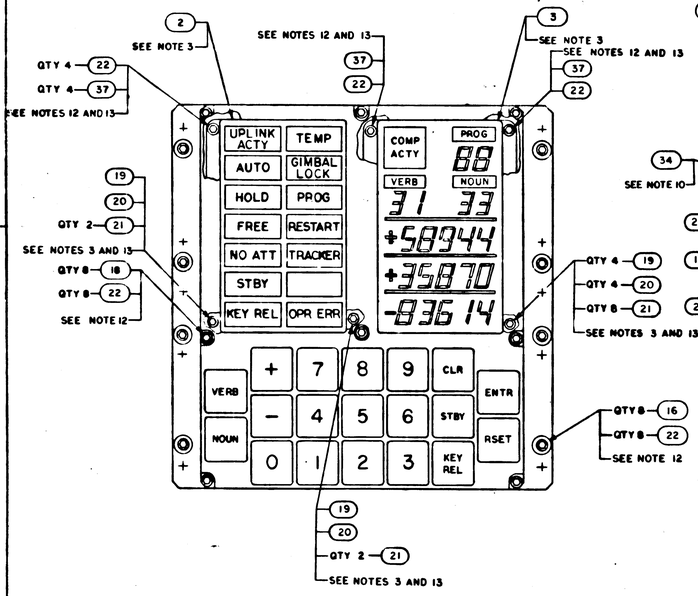
ZONE	REVISIONS	DESCRIPTION	DATE	APPROVAL
24	A	REVISED PER TDRR 22462 DR W. Dunn CHK. [illegible] APPD. [illegible]	[illegible]	[illegible]
22	B	REVISED PER TDRR 23637 DR E. Gilling CHK [illegible] APPD. [illegible]	11/17/66	[illegible]
19	C	REVISED PER TDRR 24214 DR R.B. Bryan CHK [illegible] APPD. [illegible]	12/16/66	[illegible]
17	D	REVISED PER TDRR 24667 DR [illegible] CHK [illegible]	4/12/67	[illegible]

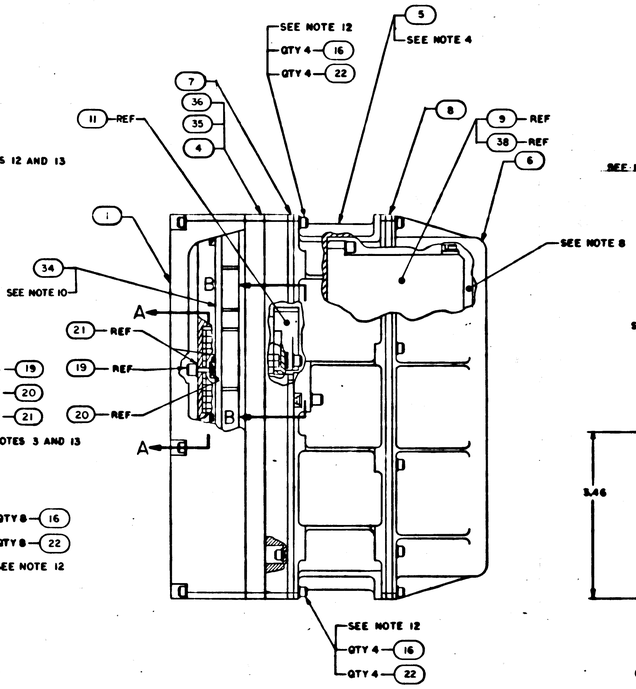


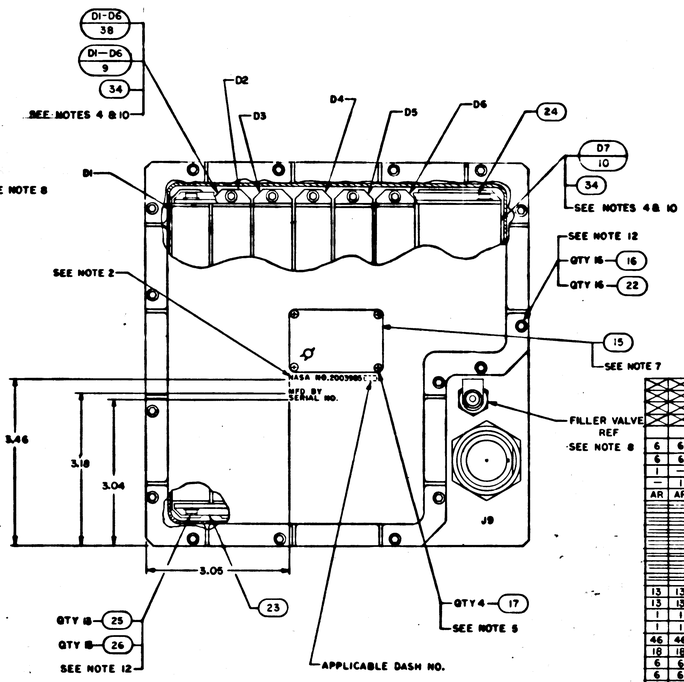




PARTIAL SECTION B-B







NOTES

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MARK .10/.08 HIGH WHITE CHARACTERS PER ND1002019 AND ND1002122, TYPE II, CLASS 2 AND SERIALIZE PER ND1002023 USING INK 1006271-1
3. MOUNTING TORQUE FOR FIND NO. 19 AND JACK SCREWS OF FIND NO. 11 TO BE 7-10 INCH POUNDS
4. MOUNTING TORQUE FOR JACK SCREWS OF FIND NO. 5, 9, 10 & 38 TO BE 15-19 INCH POUNDS
5. APPLY SEALING COMPOUND MIL-S-22473 GRADE H TO FIND NO. 17
6. ~~BOND FIND NO. 2, 13 TO FIND NO. 3, FIND NO. 14 TO FIND NO. 2, FIND NO. 22, 28, 29 TO FIND NO. 9, FIND NO. 30 TO FIND NO. 10, FIND NO. 31, 32 TO FIND NO. 5, FIND NO. 33 TO FIND NO. 11 PER ND1008838~~
7. STAMP CHARACTERS PER ND1002019 AND SERIALIZE PER ND1002023
8. FILL WITH A MINIMUM OF 87% NITROGEN AND 8.7% HELIUM AND A MAXIMUM OF 4.3% AIR TO 1.05/1.10 ATMOSPHERES. DO NOT EXCEED 2 ATMOSPHERES DURING PRESSURIZATION
9. COMPLETED ASSEMBLY SHALL BE TESTED IN ACCORDANCE WITH AND SHALL MEET ALL THE REQUIREMENTS OF PS2003985
10. APPLY FIND NO. 34 TO MATING SURFACES OF FIND NO. 4, 9, 10 & 38 DO NOT APPLY TO BONDED RUBBER OF FIND NO. 4,
11. AR DENOTES AS REQUIRED
12. MOUNTING TORQUE FOR FIND NO. 16 AND 37 TO BE 8-9 INCH POUNDS MOUNTING TORQUE FOR FIND NO. 18 AND 26 TO BE 3.5 - 4.5 INCH POUNDS
13. FIND NO. 2 AND 3 TO BE ASSEMBLE TO HEIGHT OF BONDED RUBBER OF FIND NO 4, 35 OR 36 USING FIND NO. 19, BEFORE INSTALLING FIND NO. 37

					2003956	OUTLINE DRAWING
					2003957	SIGNAL PIN ASSIGNMENT
					2003951	INTERCONNECTING DIAGRAM
					2003950	SIGNAL FLOW DIAGRAM
6	6	—	—	—	2003952-011	INDICATOR DRIVER MODULE DI-D6
6	6	6	6	6	MS16995-20	SCREW, CAP, SOCKET HEAD
1	—	1	—	—	2003903-031	FRONT HOUSING ASSY
—	1	—	1	—	2003903-021	FRONT HOUSING ASSY
AR	AR	AR	AR	AR	006879	SILICONE COMPOUND
		1	1	1	2004855-008	GASKET
		1	1	1	2004955-008	GASKET
		2	2	2	2004955-007	GASKET
		1	1	1	2004955-006	GASKET
		4	4	4	2004888-003	GASKET
		8	8	8	2004888-002	GASKET
		8	8	8	2004888-004	GASKET
13	13	13	13	13	MS16995-10	SCREW, HEX SOCKET HEAD
13	13	13	13	13	NAS620C4	WASHER, FLAT
1	1	1	1	1	2004958	BRACKET, MODULE
1	1	1	1	1	2004959	BRACKET, MODULE
46	46	46	46	46	NAS620C6	WASHER, FLAT
18	18	18	18	18	1004546-4	WASHER, FLAT
6	6	6	6	6	MS16633-4014	RING, RETAINING
6	6	6	6	6	2004932-001	SCREW, JACKING
8	8	8	8	8	1001489-59	SCREW, HEX SOCKET HEAD
4	4	4	4	4	MS35216-1	SCREW, PAN HEAD, CROSS RECESSED
32	32	32	32	32	MS16995-18	SCREW, CAP, SOCKET HEAD
1	1	1	1	1	1004260-20	NAMEPLATE
		1	1	1	2004955-001	GASKET
		1	1	1	2004955-009	GASKET
		1	1	1	2004953-001	GASKET
1	1	1	1	1	2003909-011	KEYBOARD MODULE ASSY D6
1	1	1	1	1	2003901-011	POWER SUPPLY ASSY MODULE D7
—	—	6	6	6	2003902-011	INDICATOR DRIVER MODULE DI-D6
1	1	1	1	1	1006349	GASKET, BONDED, RUBBER
1	1	1	1	1	1006350	GASKET, BONDED, RUBBER
1	1	1	1	1	2004900	COVER, REAR
1	1	1	1	1	2003954-011	MAIN HOUSING ASSY
1	—	—	—	1	2003903-011	FRONT HOUSING ASSY
1	1	1	1	1	2004935	INDICATOR, DIGITAL
1	1	1	1	1	1006316	INDICATOR, ALARM
1	1	1	1	1	2004929-011	COVER, FRONT
QTY REQD	QTY REQD	QTY REQD	QTY REQD	QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION / FIND NO.
081	041	031	021	011	LIST OF MATERIALS	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ±.02 DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINISH
NEXT ASSY | USED ON
APPLICATION

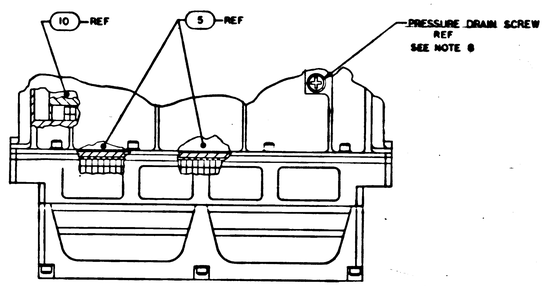
MIT INSTRUMENTATION LAB
DRAWN R. Fiske DATE 8 XII 65
CHECKED [illegible]
APPROVED [illegible]
APPROVED [illegible]
NASA APPROVAL [illegible]
MIT APPROVAL [illegible]

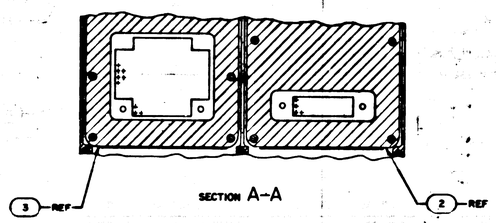
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

AGC DSKY ASSEMBLY

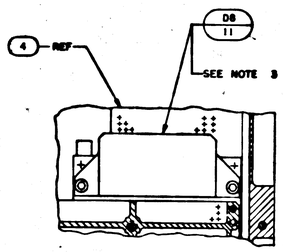
CODE IDENT NO 80230 | SIZE J | NASA DRAWING NO 2003985 | REV F
SCALE 1/1 | WT | SHEET 1 OF 1

ZONE	REVISIONS	APPROVED
A	REVISED PER TDRR 22462 DR [illegible] CHK [illegible] APPD [illegible]	[illegible]
B	REVISED PER TDRR 23637 DR [illegible] CHK [illegible] APPD [illegible]	[illegible]
C	REVISED PER TDRR 24214 DR [illegible] CHK [illegible] APPD [illegible]	[illegible]
D	REVISED PER TDRR 24667 DR [illegible] CHK [illegible]	[illegible]
E	REVISED PER TDRR 25150 DR [illegible] CHK [illegible]	[illegible]

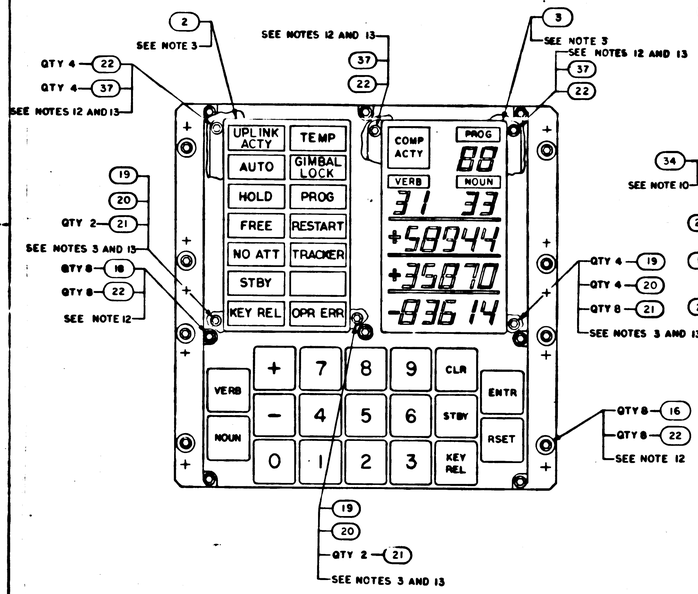


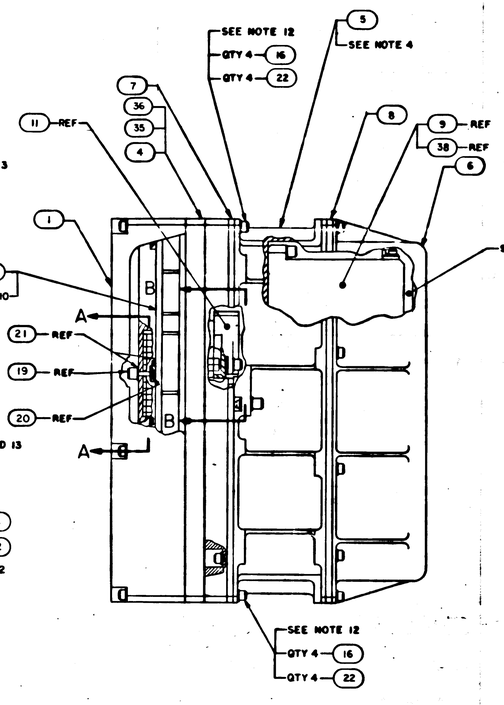


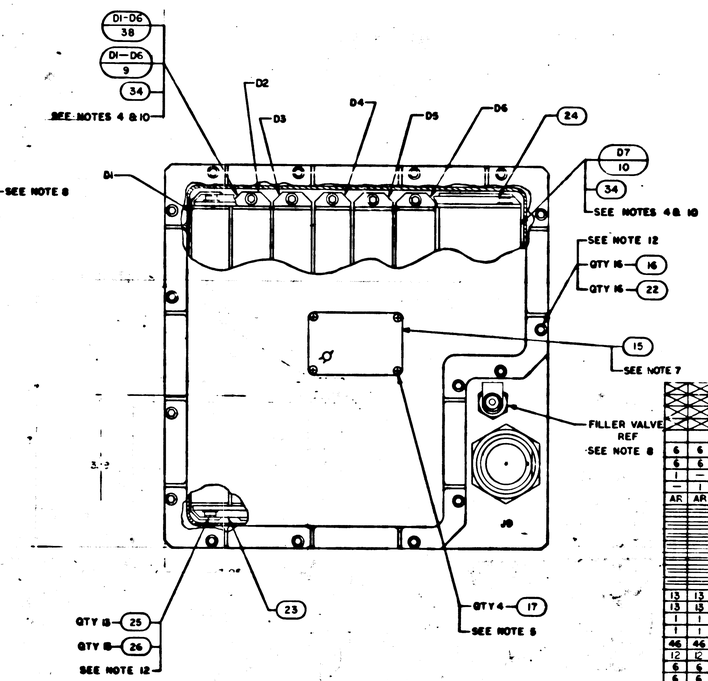
SECTION A-A



PARTIAL SECTION B-B







NOTES

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. ~~MARK JO/DS HIGH WHITE CHARACTERS PER ND1002018 AND ND1002023, TYPE B, CLASS B AND SERIALIZE PER ND1002023 USING INK 1006211.~~
3. MOUNTING TORQUE FOR FIND NO. 19 AND JACK SCREWS OF FIND NO. 11 TO BE 7-10 INCH POUNDS
4. MOUNTING TORQUE FOR JACK SCREWS OF FIND NO. 5, 9, 10 & 38 TO BE 15-19 INCH POUNDS
5. APPLY SEALING COMPOUND MIL-S-22473 GRADE H TO FIND NO. 17
6. ~~BOND FIND NO. 12, 13 TO FIND NO. 3, FIND NO. 14 TO FIND NO. 2, FIND NO. 27, 28, 29 TO FIND NO. 9, FIND NO. 30 TO FIND NO. 10, FIND NO. 31, 32 TO FIND NO. 3, FIND NO. 33 TO FIND NO. 11 PER ND1002030~~
7. MARK "AGC DSKY ASSEMBLY" AND ITS RESPECTIVE PART NO., SERIAL NO. AND CONTRACT NO. MARKING TO BE PER ND1002019 AND "SERIALIZE PER ND1002023
8. FILL WITH A MINIMUM OF 87% NITROGEN AND 8.7% HELIUM AND A MAXIMUM OF 4.3% AIR TO 1.05/1.10 ATMOSPHERES. DO NOT EXCEED 2 ATMOSPHERES DURING PRESSURIZATION
9. COMPLETED ASSEMBLY SHALL BE TESTED IN ACCORDANCE WITH AND SHALL MEET ALL THE REQUIREMENTS OF MS2003985
10. APPLY FIND NO. 34 TO MATING SURFACES OF FIND NO. 4, 8, 10, & 38 DO NOT APPLY TO BONDED RUBBER OF FIND NO. 4
11. AR DENOTES AS REQUIRED
12. MOUNTING TORQUE FOR FIND NO. 16 AND 37 TO BE 8-9 INCH POUNDS MOUNTING TORQUE FOR FIND NO. 18 AND 26 TO BE 3.5 - 4.5 INCH POUNDS
13. FIND NO. 2 AND 3 TO BE ASSEMBLE TO HEIGHT OF BONDED RUBBER OF FIND NO. 4, 35 OR 36 USING FIND NO. 19, BEFORE INSTALLING FIND NO. 37

						2003956	OUTLINE DRAWING	REF
						2005957	SIGNAL PIN ASSIGNMENT	REF
						2005951	INTERCONNECTING DIAGRAM	REF
						2005950	SIGNAL FLOW DIAGRAM	REF
6	6	–	–	–	2003952-011		INDICATOR DRIVER MODULE DI-D6	38
6	6	6	6	6	MS16995-20		SCREW, CAP, SOCKET HEAD	37
1	–	1	–	–	2003903-031		FRONT HOUSING ASSY	36
–	1	–	1	–	2003903-021		FRONT HOUSING ASSY	35
AR	AR	AR	AR	AR	1006879		SILICONE COMPOUND	34
		1	1	1	2003958-008		GASKET	33
		1	1	1	2004933-008		GASKET	32
		1	1	1	2004933-007		GASKET	31
		1	1	1	2004933-006		GASKET	30
		–	–	6	2004869-008		GASKET	29
		8	8	8	2004938-008		GASKET	28
		5	5	5	2004938-006		GASKET	27
13	13	13	13	13	MS16995-10		SCREW, HEX SOCKET HEAD	26
13	13	13	13	13	NAS620C4		WASHER, FLAT	25
1	1	1	1	1	2004958		BRACKET, MODULE	24
1	1	1	1	1	2004959		BRACKET, MODULE	23
46	46	46	46	46	NAS620C6		WASHER, FLAT	22
12	12	12	12	12	1004546-4		WASHER, FLAT	21
6	6	6	6	6	MS16633-4014		RING, RETAINING	20
6	6	6	6	6	2004932-001		SCREW, JACKING	19
8	8	8	8	8	1001489-59		SCREW, HEX SOCKET HEAD	18
4	4	4	4	4	MS35216-1		SCREW, PAN HEAD, CROSS RECESSED	17
32	32	32	32	32	MS16995-16		SCREW, CAP, SOCKET HEAD	16
1	–	1	–	–	1004260-20		NAMEPLATE	15
		1	1	1	2004955-004		GASKET	14
		1	1	1	2004955-003		GASKET	13
		1	1	1	2004955-001		GASKET	12
1	1	1	1	1	2003909-011		KEYBOARD MODULE ASSY D8	11
1	1	1	1	1	2003901-011		POWER SUPPLY ASSY MODULE D7	10
–	–	6	6	6	2003902-011		INDICATOR DRIVER MODULE DI-D6	9
1	1	1	1	1	1006349		GASKET, BONDED, RUBBER	8
1	1	1	1	1	1006350		GASKET, BONDED, RUBBER	7
1	1	1	1	1	2004900		COVER, REAR	6
1	1	1	1	1	2003954-011		MAIN HOUSING ASSY	5
–	–	–	–	1	2003903-011		FRONT HOUSING ASSY	4
1	1	1	1	1	2004935		INDICATOR, DIGITAL	3
1	1	1	1	1	1006316		INDICATOR, ALARM	2
1	1	1	1	1	2004929-011		COVER, FRONT	1
QTY REQD	QTY REQD	QTY REQD	QTY REQD	QTY REQD	PART OR IDENTIFYING NO.		NOMENCLATURE OR DESCRIPTION	FIND NO
051	041	031	021	011	LIST OF MATERIALS			

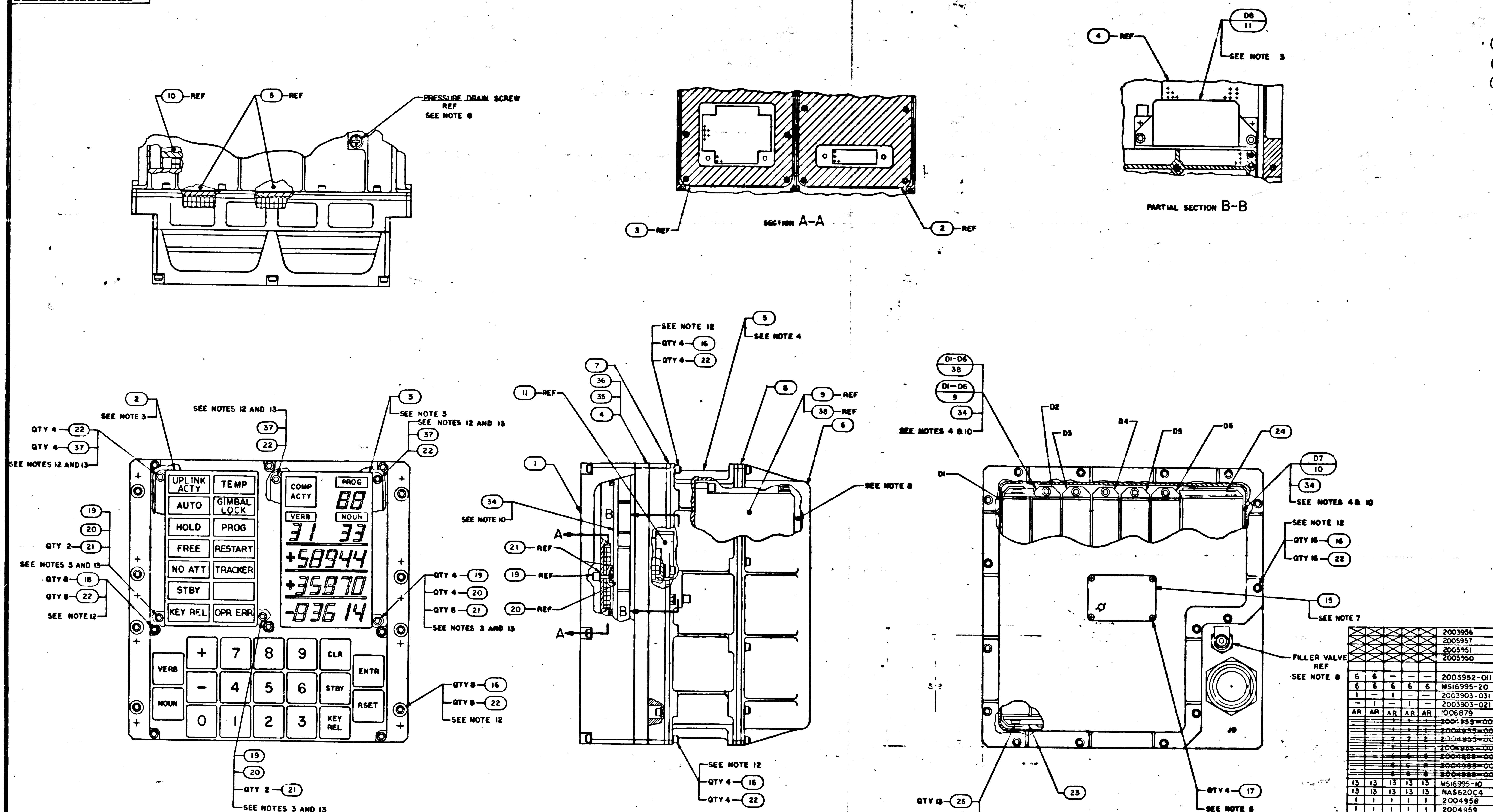
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ±1/32 DECIMALS .02 ANGLES ±1°
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINISH
NEXT ASSY | USED ON
APPLICATION

MIT INSTRUMENTATION LAB Cambridge, Mass.
DRAWN C. Weiss DATE 8-8-66
CHECKED R. Richard 8/9/66
APPROVAL [illegible]
APPROVAL [illegible]
NASA APPROVAL [illegible]
NOT APPROVED [illegible]

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

AGC DSKY ASSEMBLY

CODE IDENT NO 80230 | SIZE J | NASA DRAWING NO 2003985
SCALE 1/1 | WT | SHEET 1 OF 1



REV	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 22462 DR. W. Penn CHK. APPD.		
B	REVISED PER TDRR 23637 DR E. Yfting CHK	11/17/	
C	REVISED PER TDRR 24214 DR CHK APPD		
D	REVISED PER TDRR 24667 DR CHK		
E	REVISED PER TDRR 25150 DR CHK		
F	REVISED PER TDRR 25771 DR CHK		

2003985 F

NOTES

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. ~~MARK 10/08 HIGH WHITE CHARACTERS PER ND1002019 AND ND1002122, TYPE II, CLASS 2 AND SERIALIZE PER ND1002023 USING INK 1006271~~
3. MOUNTING TORQUE FOR FIND NO. 19 AND JACK SCREWS OF FIND NO. 11 TO BE 8.5-9.5 INCH POUNDS
4. MOUNTING TORQUE FOR JACK SCREWS OF FIND NO. 5, 9, 10 & 38 TO BE 15-19 INCH POUNDS
5. APPLY SEALING COMPOUND MIL-S-22473 GRADE H TO FIND NO. 17
6. ~~BOND FIND NO. 12, 13 TO FIND NO. 3, FIND NO. 14 TO FIND NO. 2, FIND NO. 27, 28, 29 TO FIND NO. 9, FIND NO. 30 TO FIND NO. 10, FIND NO. 31, 32 TO FIND NO. 5, FIND NO. 33 TO FIND NO. 11 PER ND1002237~~
7. MARK "AGC DSKY ASSEMBLY" AND IT'S RESPECTIVE PART NO., SERIAL NO. AND CONTRACT NO. MARKING TO BE PER ND1002019 AND SERIALIZE PER ND1002023
8. FILL WITH A MINIMUM OF 87% NITROGEN AND 8.7% HELIUM AND A MAXIMUM OF 4.3% AIR TO 1.05/1.10 ATMOSPHERES. DO NOT EXCEED 2 ATMOSPHERES DURING PRESSURIZATION
9. COMPLETED ASSEMBLY SHALL BE TESTED IN ACCORDANCE WITH AND SHALL MEET ALL THE REQUIREMENTS OF PS2003985
10. APPLY FIND NO. 34 TO MATING SURFACES OF FIND NO. 4, 9, 10, & 38 DO NOT APPLY TO BONDED RUBBER OF FIND NO. 4
11. AR DENOTES AS REQUIRED
12. MOUNTING TORQUE FOR FIND NO. 16, 18 & 37 TO BE 8-9 INCH POUNDS MOUNTING TORQUE FOR FIND NO. 26 TO BE 3.5—4.5 INCH POUNDS
13. FIND NO. 2 AND 3 TO BE ASSEMBLE TO HEIGHT OF BONDED RUBBER OF FIND NO. 4, 35 OR 36 USING FIND NO. 19, BEFORE INSTALLING FIND NO. 37

QTY REQD 051	QTY REQD 041	QTY REQD 031	QTY REQD 021	QTY REQD 011	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
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X	X	X	X	X	2005957	SIGNAL PIN ASSIGNMENT	REF
X	X	X	X	X	2005951	INTERCONNECTING DIAGRAM	REF
X	X	X	X	X	2005950	SIGNAL FLOW DIAGRAM	REF
6	6	—	—	—	2003952-011	INDICATOR DRIVER MODULE DI-D6	38
6	6	6	6	6	MS16995-20	SCREW, CAP, SOCKET HEAD	37
1	—	1	—	—	2003903-031	FRONT HOUSING ASSY	36
—	1	—	1	—	2003903-021	FRONT HOUSING ASSY	35
AR	AR	AR	AR	AR	1006879	SILICONE COMPOUND	34
~~—~~	~~—~~	~~1~~	~~1~~	~~1~~	~~[illegible]-008~~	~~GASKET~~	~~33~~
~~—~~	~~—~~	~~1~~	~~1~~	~~1~~	~~2004955-008~~	~~GASKET~~	~~32~~
~~—~~	~~—~~	~~2~~	~~2~~	~~2~~	~~2004955-007~~	~~GASKET~~	~~31~~
~~—~~	~~—~~	~~1~~	~~1~~	~~1~~	~~2004955-006~~	~~GASKET~~	~~30~~
~~—~~	~~—~~	~~6~~	~~6~~	~~6~~	~~[illegible]-003~~	~~GASKET~~	~~29~~
~~—~~	~~—~~	~~6~~	~~6~~	~~6~~	~~2004988-002~~	~~GASKET~~	~~28~~
~~—~~	~~—~~	~~6~~	~~6~~	~~6~~	~~[illegible]-004~~	~~GASKET~~	~~27~~
13	13	13	13	13	MS16995-10	SCREW, HEX SOCKET HEAD	26
13	13	13	13	13	NAS620C4	WASHER, FLAT	25
1	1	1	1	1	2004958	BRACKET, MODULE	24
1	1	1	1	1	2004959	BRACKET, MODULE	23
46	46	46	46	46	NAS620C6	WASHER, FLAT	22
12	12	12	12	12	1004546-4	WASHER, FLAT	21
6	6	6	6	6	MS16633-4014	RING, RETAINING	20
6	6	6	6	6	2004932-001	SCREW, JACKING	19
8	8	8	8	8	1001489-59	SCREW, HEX SOCKET HEAD	18
4	4	4	4	4	MS35216-1	SCREW, PAN HEAD, CROSS RECESSED	17
32	32	32	32	32	MS16995-18	SCREW, CAP, SOCKET HEAD	16
1	1	1	1	1	1004260-20	NAMEPLATE	15
~~—~~	~~—~~	~~1~~	~~1~~	~~1~~	~~2004955-001~~	~~GASKET~~	~~14~~
~~—~~	~~—~~	~~1~~	~~1~~	~~1~~	~~2004953-002~~	~~GASKET~~	~~13~~
~~—~~	~~—~~	~~1~~	~~1~~	~~1~~	~~2004953-001~~	~~GASKET~~	~~12~~
1	1	1	1	1	2003909-011	KEYBOARD MODULE ASSY D8	11
1	1	1	1	1	2003901-011	POWER SUPPLY ASSY MODULE D7	10
—	—	6	6	6	2003902-011	INDICATOR DRIVER MODULE DI-D6	9
1	1	1	1	1	1006349	GASKET, BONDED, RUBBER	8
1	1	1	1	1	1006350	GASKET, BONDED, RUBBER	7
1	1	1	1	1	2004900	COVER, REAR	6
1	1	1	1	1	2003954-011	MAIN HOUSING ASSY	5
—	—	—	—	1	2003903-011	FRONT HOUSING ASSY	4
1	1	1	1	1	2004935	INDICATOR, DIGITAL	3
1	1	1	1	1	1006316	INDICATOR, ALARM	2
1	1	1	1	1	2004929-011	COVER, FRONT	1

LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS — DECIMALS ±.02 ANGLES —

DO NOT SCALE THIS DRAWING

MATERIAL

HEAT TREATMENT

FINAL FINISH

NEXT ASSY | USED ON

APPLICATION

M I T INSTRUMENTATION LAB CAMBRIDGE MASS

DRAWN A. Vosce DATE

CHECKED

APPROVAL

APPROVAL

NASA APPROVAL

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

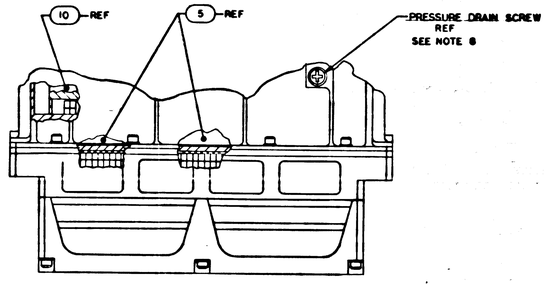
AGC DSKY ASSEMBLY

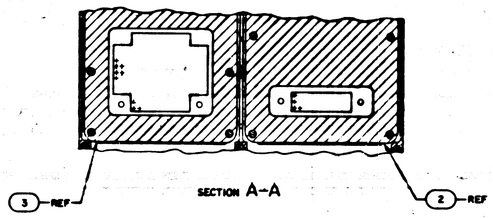
CODE IDENT NO 80230 | SIZE J | NASA DRAWING NO 2003985

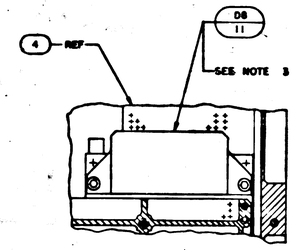
SCALE 1/1 | SHEET 1 OF 1

2003985 F

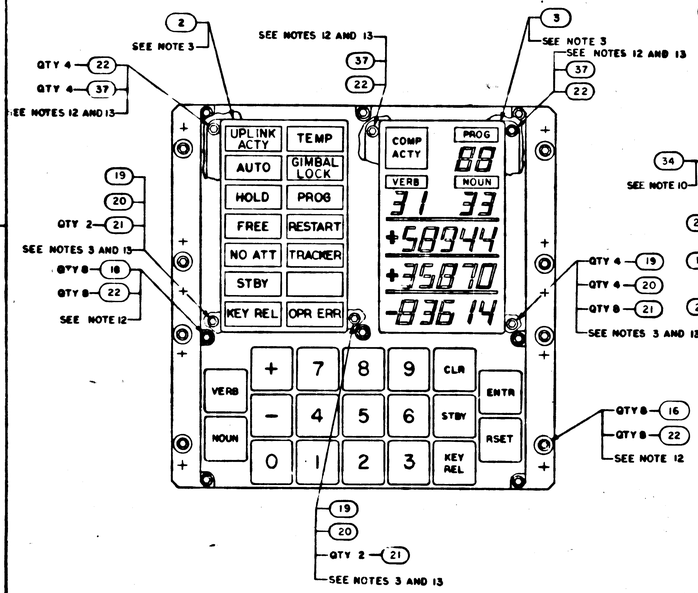
ZONE	REV	DESCRIPTION	DATE	APPROVAL
		Revisions 24742		
	A	REVISED PER TDRR 22462 DR CHK. APPD		
	B	REVISED PER TDRR 23637 DR CHK APPD		
	C	REVISED PER TDRR 24214 DR CHK APPD		
	D	REVISED PER TDRR 24667 DR CHK		
	E	REVISED PER TDRR 25150 DR CHK		
	F	REVISED PER TDRP 25771 DR CHK		
	G	REVISED PER TDRR 27087 DR CHK APPD		

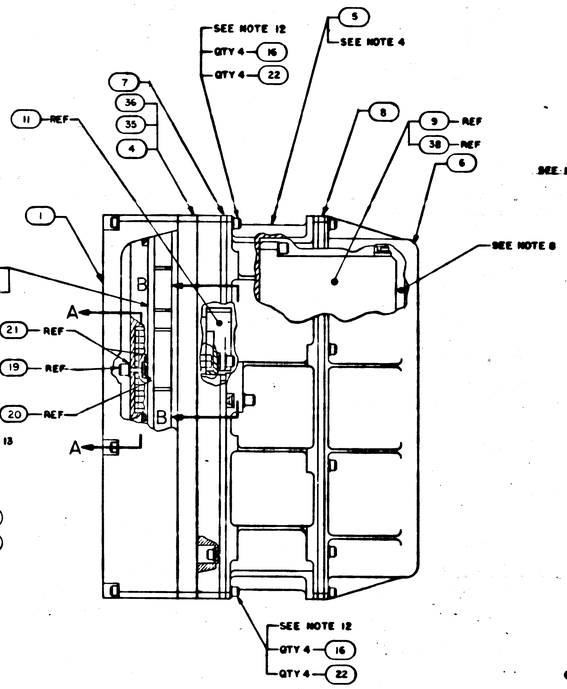


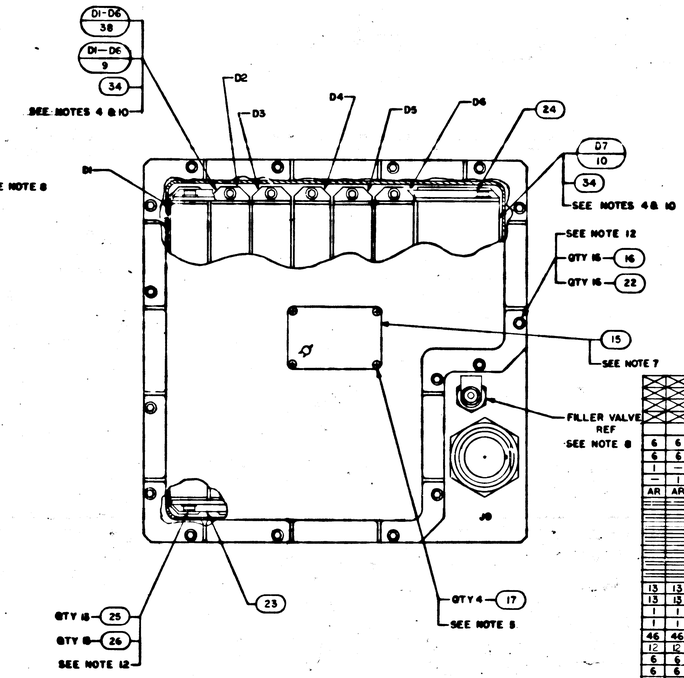




PARTIAL SECTION B-B







NOTES

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. ~~MARK 10/08 HIGH WHITE CHARACTERS PER ND1002008 AND ND1002128, TYPE II, CLASS 2, AND SERIALIZE PER ND1002023 USING INK 10062.~~
3. MOUNTING TORQUE FOR FIND NO. 19 AND JACK SCREWS OF FIND NO. 11 TO BE 8.5-9.5 INCH POUNDS
4. MOUNTING TORQUE FOR JACK SCREWS OF FIND NO. 5,9,10 & 38 TO BE 15-19 INCH POUNDS
5. APPLY SEALING COMPOUND MIL-S-22473 GRADE H TO FIND NO. 17
6. ~~BOND FIND NO. 1, 3 TO FIND NO. 2, FIND NO. 4 TO FIND NO. 5, FIND NO. 22, 28, 29 TO FIND NO. 9, FIND NO. 30 TO FIND NO. 10, FIND NO. 31, 32 TO FIND NO. 35, FIND NO. 33 TO FIND NO. 11 PER ND1002128.~~
7. MARK "AGC DSKY ASSEMBLY" AND IT'S RESPECTIVE PART NO., SERIAL NO. AND CONTRACT NO. MARKING TO BE PER ND1002019 AND "SERIALIZE PER ND1002023
8. FILL WITH A MINIMUM OF 87% NITROGEN AND 8.7% HELIUM AND A MAXIMUM OF 4.3% AIR TO 1.05/1.10 ATMOSPHERES. DO NOT EXCEED 2 ATMOSPHERES DURING PRESSURIZATION
9. COMPLETED ASSEMBLY SHALL BE TESTED IN ACCORDANCE WITH AND SHALL MEET ALL THE REQUIREMENTS OF PS2003985
10. APPLY FIND NO. 34 TO MATING SURFACES OF FIND NO. 4, 9, 10, & 38 DO NOT APPLY TO BONDED RUBBER OF FIND NO. 4
11. AR DENOTES AS REQUIRED
12. MOUNTING TORQUE FOR FIND NO. 16, 18 & 37 TO BE 8-9 INCH POUNDS MOUNTING TORQUE FOR FIND NO. 26 TO BE 3.5-4.5 INCH POUNDS
13. FIND NO. 2 AND 3 TO BE ASSEMBLE TO HEIGHT OF BONDED RUBBER OF FIND NO. 4, 35 OR 36 USING FIND NO. 19, BEFORE INSTALLING FIND NO. 37

					2003956	OUTLINE DRAWING	REF
					2005957	SIGNAL PIN ASSIGNMENT	REF
					2005951	INTERCONNECTING DIAGRAM	REF
					2005950	SIGNAL FLOW DIAGRAM	REF
6	6	—	—	—	2003952-011	INDICATOR DRIVER MODULE DI-D6	38
6	6	6	6	6	MS16995-20	SCREW, CAP, SOCKET HEAD	37
1	—	1	—	—	2003903-031	FRONT HOUSING ASSY	36
—	1	—	1	—	2003903-021	FRONT HOUSING ASSY	35
AR	AR	AR	AR	AR	1006879	SILICONE COMPOUND	34
		1	1	1	~~2004953-003~~	~~GASKET~~	~~33~~
		1	1	1	~~2004955-003~~	~~GASKET~~	~~32~~
		2	2	2	2004955-007	GASKET	31
		1	1	1	2004953-005	GASKET	30
		6	6	6	2004956-003	GASKET	29
		6	6	6	2004958-003	GASKET	28
		6	6	6	2004958-005	GASKET	27
13	13	13	13	13	MS16995-10	SCREW, HEX SOCKET HEAD	26
13	13	13	13	13	NAS620C4	WASHER, FLAT	25
1	1	1	1	1	2004958	BRACKET, MODULE	24
1	1	1	1	1	2004959	BRACKET, MODULE	23
46	46	46	46	46	NAS620C6	WASHER, FLAT	22
12	12	12	12	12	1004546-4	WASHER, FLAT	21
6	6	6	6	6	MS16633-4014	RING, RETAINING	20
6	6	6	6	6	2004932-001	SCREW, JACKING	19
8	8	8	8	8	1001489-69	SCREW, HEX SOCKET HEAD	18
4	4	4	4	4	MS35216-1	SCREW, PAN HEAD, CROSS RECESSED	17
32	32	32	32	32	MS16995-18	SCREW, CAP, SOCKET HEAD	16
1	1	1	1	1	1004260-20	NAMEPLATE	15
		1	1	1	2004955-001	GASKET	14
		1	1	1	2004953-006	GASKET	13
		1	1	1	~~2004955-001~~	~~GASKET~~	~~12~~
1	1	1	1	1	2003909-011	KEYBOARD MODULE ASSY D6	11
1	1	1	1	1	2003901-011	POWER SUPPLY ASSY MODULE D7	10
—	—	6	6	6	2003902-011	INDICATOR DRIVER MODULE DI-D6	9
1	1	1	1	1	1006349	GASKET, BONDED, RUBBER	8
1	1	1	1	1	1006350	GASKET, BONDED, RUBBER	7
1	1	1	1	1	2004900	COVER, REAR	6
1	1	1	1	1	2003954-011	MAIN HOUSING ASSY	5
—	—	1	—	—	2003903-011	FRONT HOUSING ASSY	4
1	1	1	1	1	1006315	INDICATOR, DIGITAL	3
1	1	1	1	1	1006316	INDICATOR, ALARM	2
1	1	1	1	1	2004929-011	COVER, FRONT	1
QTY REQD	QTY REQD	QTY REQD	QTY REQD	QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
051	041	031	021	011	LIST OF MATERIALS		

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± .02 DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINISH
NEXT ASSY | USED ON
APPLICATION

MIT INSTRUMENTATION LAB Cambridge Mass.
DRAWN A. Weiss DATE 2/22/66
CHECKED R. Howard
APPROVAL
APPROVAL
NASA APPROVAL
MIT APPROVAL

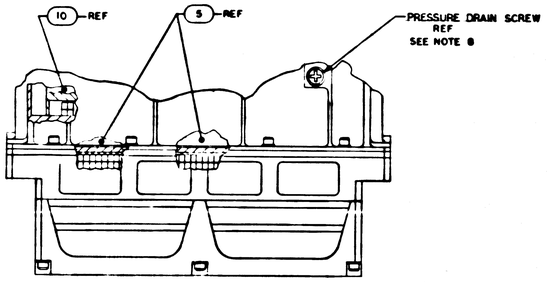
MANNED SPACECRAFT CENTER HOUSTON, TEXAS

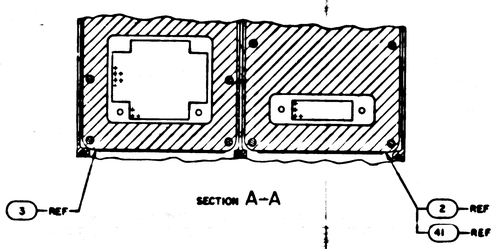
AGC DSKY ASSEMBLY

CODE IDENT NO 80230 | SIZE J | NASA DRAWING NO 2003985
SCALE 1/1 | WT | SHEET 1 OF 1

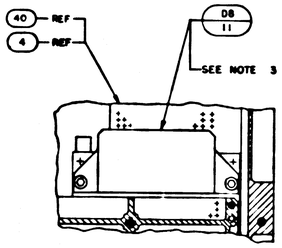
MASTER

QTY	DESCRIPTION	DATE	APPROVED
A	REVISED PER TDRR 22462 DR [illegible] CHK [illegible] APPD [illegible]	[illegible]	
B	REVISED PER TDRR 23637 DR [illegible] CHK [illegible]	[illegible]	
C	REVISED PER TDRR 24214 DR [illegible] CHK [illegible] APPD [illegible]	[illegible]	
D	REVISED PER TDRR 24667 DR [illegible] CHK [illegible]	[illegible]	
E	REVISED PER TDRR 25150 DR [illegible] CHK [illegible]	[illegible]	
F	REVISED PER TDRR 25771 DR [illegible] CHK [illegible]	[illegible]	
G	REVISED PER TDRR 27087 DR [illegible] CHK [illegible] APPD [illegible]	[illegible]	
H	REVISED PER TDRR 35068 DR [illegible] CHK [illegible]	[illegible]	

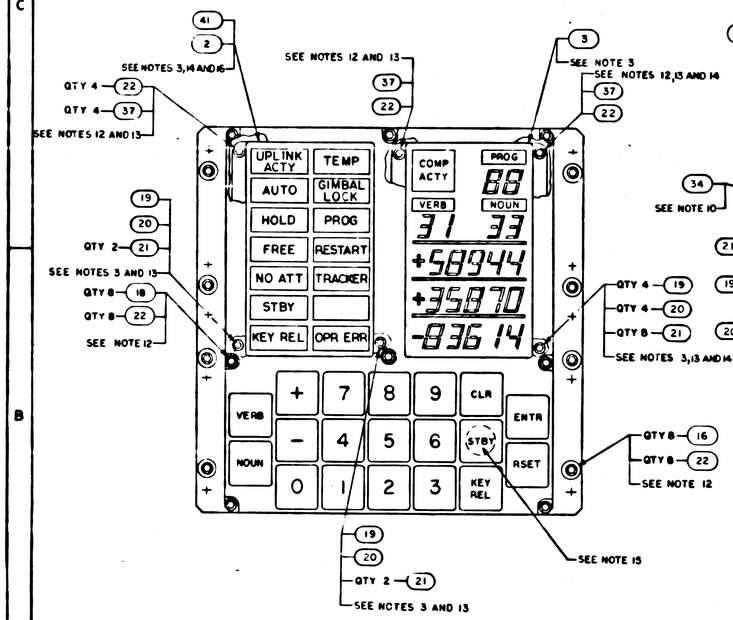


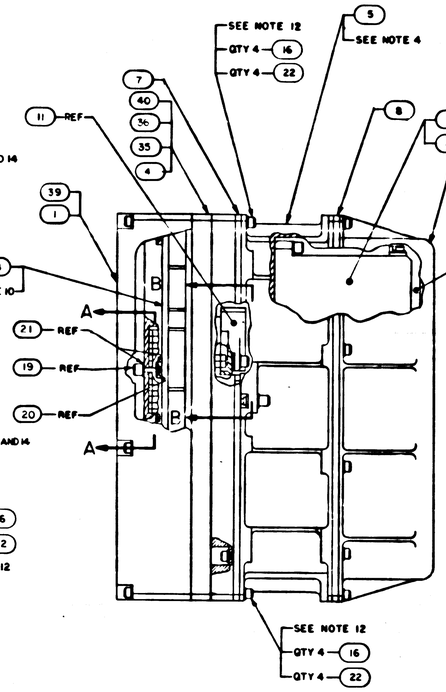


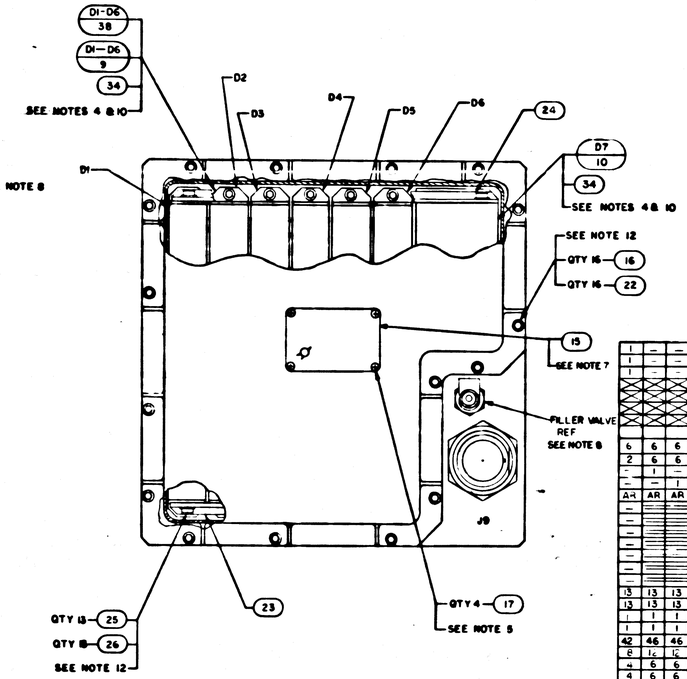
SECTION A-A



PARTIAL SECTION B-B







NOTES

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. ~~MARK 10/08 HIGH WHITE CHARACTERS PER ND1002018 AND ND1002123, TYPE II, CLASS 2, AND SERIALIZE PER ND1002023 USING INK 100627~~
3. MOUNTING TORQUE FOR FIND NO. 19 AND JACK SCREWS OF FIND NO. 11 AND 41 TO BE 8.5-9.5 INCH POUNDS
4. MOUNTING TORQUE FOR JACK SCREWS OF FIND NO.5,9,10 & 38 TO BE 15-19 INCH POUNDS
5. APPLY SEALING COMPOUND MIL-S-22473 GRADE H TO FIND NO.17
6. ~~BOND FIND NO.12,13 TO FIND NO.3, FIND NO.14 TO FIND NO.2, FIND NO.22,28,29 TO FIND NO.9, FIND NO.30 TO FIND NO.10, FIND NO.32 TO FIND NO.5, FIND NO.38 TO FIND NO.11 PER NDI002238~~
7. MARK "AGC DSKY ASSEMBLY" AND ITS RESPECTIVE PART NO., SERIAL NO. AND CONTRACT NO. MARKING TO BE PER ND1002019 AND SERIALIZE PER ND1002023
8. FILL WITH A MINIMUM OF 87% NITROGEN AND 8.7% HELIUM AND A MAXIMUM OF 4.3% AIR TO 1.05/1.10 ATMOSPHERES. DO NOT EXCEED 2 ATMOSPHERES DURING PRESSURIZATION
9. COMPLETED ASSEMBLY SHALL BE TESTED IN ACCORDANCE WITH AND SHALL MEET ALL THE REQUIREMENTS OF PS2003985
10. APPLY FIND NO. 34 TO MATING SURFACES OF FIND NO. 4, 9, 10, 38, 35, 36, & 40 DO NOT APPLY TO BONDED RUBBER OF FIND NO. 4, 35, 36, OR 40
11. AR DENOTES AS REQUIRED
12. MOUNTING TORQUE FOR FIND NO. 16 & 8 37 TO BE 8-9 INCH POUNDS MOUNTING TORQUE FOR FIND NO. 26 TO BE 3.5-4.5 INCH POUNDS
13. FIND NO. 2 AND 3 TO BE ASSEMBLE TO HEIGHT OF BONDED RUBBER OF FIND NO. 4, 35 OR 36 USING FIND NO. 19, BEFORE INSTALLING FIND NO. 37
14. FIND NO. 3 TO BE ASSEMBLED TO HEIGHT OF BONDED RUBBER OF FIND NO. 40 USING FIND NO. 19 BEFORE INSTALLING FIND NO. 37, FIND NO. 41 TO BE INSTALLED USING EXISTING JACKING SCREWS. ASSEMBLE IN AN ENVIRONMENT HAVING A TEMPERATURE OF 72° ± 5°F AND A RELATIVE HUMIDITY OF 50% OR LESS.
15. THE -011, -021, -031, -041 & -051 CONFIGURATIONS SHALL REFLECT A NOMENCLATURE AS SHOWN THE -061 CONFIGURATION SHALL REFLECT "PRO" IN KEY POSITION INDICATED.
16. PICTORIAL SHOWN IS THAT OF THE -011 THRU -051 CONFIGURATIONS. THE -061 CONFIGURATION SHALL EXHIBIT ONLY TEN ALARM LEGENDS ON FIND NO. 41.

DASH NO	APPLICABLE
-061	1 THRU 12, 14 THRU 16
-051	1 THRU 13 AND 15
-041	1 THRU 13 AND 15
-031	1 THRU 13 AND 15
-021	1 THRU 13 AND 15
-011	1 THRU 13 AND 15

NOTE APPLICATION

QTY REQD -061	QTY REQD -051	QTY REQD -041	QTY REQD -031	QTY REQD -021	QTY REQD -011	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO
1	—	—	—	—	—	2003898-011	INDICATOR ALARM & COVER ASSY	41
1	—	—	—	—	—	2003905-041	FRONT HOUSING ASSY	40
1	—	—	—	—	—	2004739	COVER, FRONT	39
						2003956	OUTLINE DRAWING	REF
						2005957	SIGNAL PIN ASSIGNMENT	REF
						2005951	INTERCONNECTING DIAGRAM	REF
						2005950	SIGNAL FLOW DIAGRAM	REF
6	6	6	—	—	—	2003952-011	INDICATOR DRIVER MODULE DI-D6	38
2	6	6	6	6	6	MS16995-20	SCREW, CAP, SOCKET HEAD	37
—	—	1	—	1	—	2003903-031	FRONT HOUSING ASSY	36
—	—	—	1	—	1	2003903-021	FRONT HOUSING ASSY	35
AR	AR	AR	AR	AR	AR	1006879	SILICONE COMPOUND	34
—	—	—	1	1	1	2004953-003	GASKET	33
—	—	—	1	1	1	2004953-008	GASKET	32
—	—	—	2	2	2	2004955-001	GASKET	31
—	—	—	1	1	1	2004958-006	GASKET	30
—	—	—	6	6	6	2004938-003	GASKET	29
—	—	—	6	6	6	2004959-002	GASKET	28
—	—	—	6	6	6	2004938-006	GASKET	27
13	13	13	13	13	13	MS16995-10	SCREW, HEX SOCKET HEAD	26
13	13	13	13	13	13	NAS620C4	WASHER, FLAT	25
1	1	1	1	1	1	2004958	BRACKET, MODULE	24
1	1	1	1	1	1	2004959	BRACKET, MODULE	23
42	46	46	46	46	46	NAS62006	WASHER, FLAT	22
8	16	16	12	12	12	1004546-4	WASHER, FLAT	21
4	6	6	6	6	6	MS16633-4014	RING, RETAINING	20
4	6	6	6	6	6	2004932-001	SCREW, JACKING	19
8	8	8	8	8	8	1001489-59	SCREW, HEX SOCKET HEAD	18
4	4	4	4	4	4	MS35216-1	SCREW, PAN HEAD, CROSS RECESSED	17
32	32	32	32	32	32	MS16995-18	SCREW, CAP, SOCKET HEAD	16
1	1	1	1	1	1	1002480-20	NAMEPLATE	15
—	—	—	1	1	1	2004955-004	GASKET	14
—	—	—	1	1	1	2004953-006	GASKET	13
—	—	—	1	1	1	2004953-001	GASKET	12
1	1	1	1	1	1	2003909-011	KEYBOARD MODULE ASSY D8	11
1	1	1	1	1	1	2003901-311	POWER SUPPLY ASSY MODULE D7	10
—	—	—	6	6	6	2003902-011	INDICATOR DRIVER MODULE DI-D6	9
1	1	1	1	1	1	1006349	GASKET, BONDED, RUBBER	8
1	1	1	1	1	1	1006350	GASKET, BONDED, RUBBER	7
1	1	1	1	1	1	2004900	COVER, REAR	6
1	1	1	1	1	1	2003954-011	MAIN HOUSING ASSY	5
—	—	—	—	—	1	2003903-011	FRONT HOUSING ASSY	4
1	1	1	1	1	1	1006315	INDICATOR, DIGITAL	3
—	1	1	1	1	1	1006316	INDICATOR, ALARM	2
1	1	1	1	1	1	2004929-011	COVER, FRONT	1

LIST OF MATERIALS

NEXT ASSY	USED ON	APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ±.02 DECIMALS ANGLES DO NOT SCALE THIS DRAWING MATERIAL HEAT TREATMENT FINISH

SET INSTRUMENTATION - AGC COMPONENT

DRAWN [illegible] DATE [illegible] CHECKED [illegible] APPROVAL [illegible] APPROVAL [illegible] NASA APPROVAL [illegible] GPT APPROVAL [illegible]

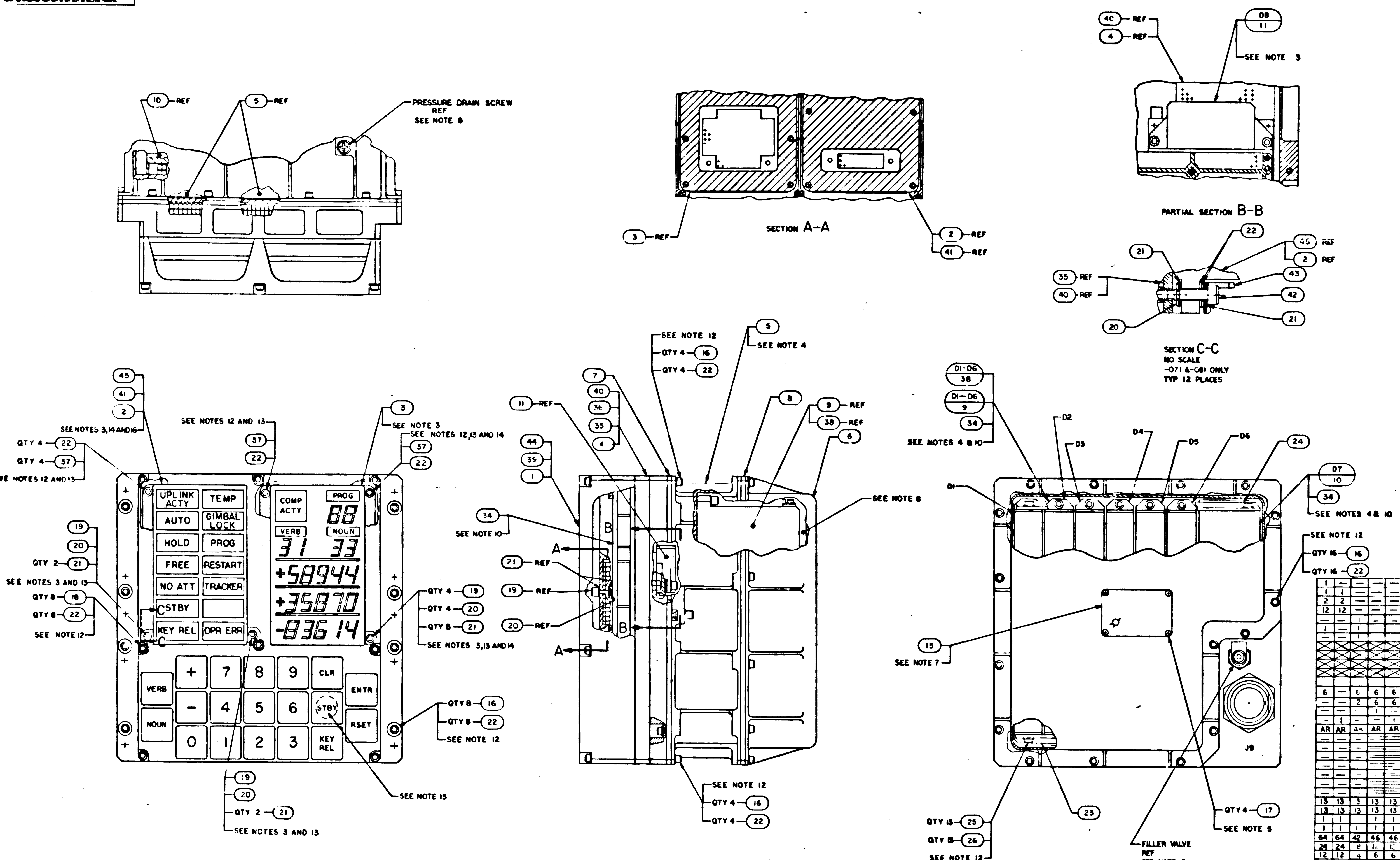
MANNED SPACECRAFT CENTER HOUSTON, TEXAS

AGC DSKY ASSEMBLY

CODE IDENT NO	SIZE	NASA DRAWING NO
80230	J	2003985

SCALE 1/1 WT SHEET 1 OF 1

2003985 H



17 FIND NO. 45 TO BE EITHER 1006387-002 OR 1006387-003

NOTES

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
~~2. MARK 10/08 HIGH WHITE CHARACTERS PER ND1002019 AND ND1002122, TYPE II, CLASS 2 AND SERIALIZE PER ND1002023 USING INK 1006271-1~~
3. MOUNTING TORQUE FOR FIND NO 19 & FIND NO. 42 AND JACK SCREWS OF FIND NO. 11 AND 41 TO BE 8.5–9.5 INCH POUNDS
4. MOUNTING TORQUE FOR JACK SCREWS OF FIND NO. 5, 9, 10 & 38 TO BE 15-19 INCH POUNDS
5. APPLY SEALING COMPOUND PER 1008953-004 TO FIND NO. 17
~~6. BOND FIND NO. 12, 13 TO FIND NO. 3, FIND NO. 14 TO FIND NO. 2, FIND NO. 27, 28, 29 TO FIND NO. 9, FIND NO. 30 TO FIND NO. 10, FIND NO. 31, 32 TO FIND NO. 5, FIND NO. 33 TO FIND NO. 11 PER ND1002237~~
7. MARK "AGC DSKY ASSEMBLY" AND IT'S RESPECTIVE PART NO., SERIAL NO. AND CONTRACT NO. MARKING TO BE PER ND1002019 AND SERIALIZE PER ND1002023
8. FILL WITH A MINIMUM OF 87% NITROGEN AND 8.7% HELIUM AND A MAXIMUM OF 4.3% AIR TO 1.05/1.10 ATMOSPHERES. DO NOT EXCEED 2 ATMOSPHERES DURING PRESSURIZATION
9. COMPLETED ASSEMBLY SHALL BE TESTED IN ACCORDANCE WITH AND SHALL MEET ALL THE REQUIREMENTS OF PS2003985
10. APPLY FIND NO. 34 TO MATING SURFACES OF FIND NO. 4, 9, 10, 38, 35, 36, & 40 DO NOT APPLY TO BONDED RUBBER OF FIND NO. 4, 35, 36, OR 40
11. AR DENOTES AS REQUIRED
12. MOUNTING TORQUE FOR FIND NO. 16, 18 & 37 TO BE 8-9 INCH POUNDS MOUNTING TORQUE FOR FIND NO 26 TO BE 35—45 INCH POUNDS
13. FILL FEMALE INSULATATORS OF FIND NO 4, 35 OR 36 USING SILICONE COMPOUND PER 1008954 PRIOR TO ASSEMBLY OF FIND NO.2 & FIND NO.3. FIND NO 2 & 3 TO BE ASSEMBLED TO HEIGHT OF BONDED RUBBER OF FIND NO 4, 35 OR 36 USING FIND NO 19, BEFORE INSTALLING FIND NO. 37
14. FILL FEMALE INSULATOR OF FIND NO 40 USING SILICONE COMPOUND PER 1008954 PRIOR TO ASSEMBLY OF FIND NO.3. FINE NO3 TO BE ASSEMBLED TO HEIGHT OF BONDED RUBBER OF FIND NO. 40 USING FIND NO. 19 BEFORE INSTALLING FIND NO 37. FIND NO. 41 TO BE INSTALLED USING EXISTING JACKING SCREWS.
15. THE -011, -021, -031, -041, -051 & -071 CONFIGURATIONS SHALL REFLECT A NOMENCLATURE AS SHOWN. THE -061 & -081 CONFIGURATION SHALL REFLECT "PRO" IN KEY POSITION INDICATED.
16. PICTORIAL SHOWN IS THAT OF THE -011 THRU -051 & -071 CONFIGURATIONS. THE -061 & -081 CONFIGURATION SHALL EXHIBIT ONLY TEN ALARM LEGENDS ON FIND NO 41 OR FIND NO. 45

DASH NO	APPLICABLE
-081	1 THRU 12, 15 THRU 17
-071	1 THRU 12, 15, 16
-061	1 THRU 12, 14 THRU 16
-051	1 THRU 13 AND 15
-041	1 THRU 13 AND 15
-031	1 THRU 13 AND 15
-021	1 THRU 13 AND 15
-011	1 THRU 13 AND 15

NOTE APPLICATION

REVISIONS

SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 22462 DR CHK APPD		
B	REVISED PER TDRR 23637 DR CHK		
C	REVISED PER TDRR 24214 DR CHK APPD		
D	REVISED PER TDRR 24667 DR CHK		
E	REVISED PER TDRR 25150 DR CHK		
F	REVISED PER TDRR 25771 DR CHK		
G	REVISED PER TDRR 27087 DR CHK APPD		
H	REVISED PER TDRR 35068 DR CHK		
J	REVISED PER TDRR 36014 DR CHK		
K	REVISED PER TDRR 36654 DR CHK		

2003985 K

LIST OF MATERIALS

QTY REQD 081	QTY REQD 071	QTY REQD 061	QTY REQD 051	QTY REQD 041	QTY REQD 031	QTY REQD 021	QTY REQD 011	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO
1	—	—	—	—	—	—	—	SEE NOTE 17	INDICATOR ALARM	45
1	1	—	—	—	—	—	—	2004739-001	COVER, FRONT	44
2	2	—	—	—	—	—	—	2003897-041	COVER ASSY	43
12	12	—	—	—	—	—	—	2004932-004	SCREW JACKING	42
—	—	1	—	—	—	—	—	2003899-011	INDICATOR ALARM & COVER ASSY	41
1	—	1	—	—	—	—	—	2003903-041	FRONT HOUSING ASSY	40
—	—	1			—	—	—	2004739-000	COVER, FRONT	39
X	X	X	X	X	X	X	X	2003556	OUTLINE DRAWING	REF
X	X	X	X	X	X	X	X	2005957	SIGNAL PIN ASSIGNMENT	REF
X	X	X	X	X	X	X	X	2005951	INTERCONNECTING DIAGRAM	REF
X	X	X	X	X	X	X	X	2005950	SIGNAL FLOW DIAGRAM	REF
6	—	6	6	6	—	—	—	2003952-011	INDICATOR DRIVER MODULE D1-D6	38
—	—	2	6	6	6	6	6	MS16995 20	SCREW, CAP, SOCKET HEAD	37
—	—		1	—	1	—	—	2003903-031	FRONT HOUSING ASSY	36
-	1	-	—	1	—	1	-	2003903-021	FRONT HOUSING ASSY	35
AR	AR	AR	AR	AR	AR	AR	AR	1006879	SILICONE COMPOUND	34
—	—	—			~~1~~	~~1~~	~~1~~	~~2004959-003~~	~~GASKET~~	~~33~~
—	—	—			~~1~~	~~1~~	~~1~~	~~2004955-008~~	~~GASKET~~	~~32~~
—	—	—			~~2~~	~~2~~	~~2~~	~~2004955-007~~	~~GASKET~~	~~31~~
—	—	—			1	1	1	2004955-006	GASKET	30
—	—	—			~~6~~	~~6~~	~~6~~	~~2004958-003~~	~~GASKET~~	~~29~~
—	—	—			~~6~~	~~6~~	~~6~~	~~2004958-002~~	~~GASKET~~	~~28~~
—	—				~~6~~	~~6~~	~~6~~	~~2004958-001~~	~~GASKET~~	~~27~~
13	13	13	13	13	13	13	13	MS16995-10	SCREW, HEX SOCKET HEAD	26
13	13	13	13	13	13	13	13	NAS620C4	WASHER, FLAT	25
1	1		1	1	1	1	1	2004958	BRACKET, MODULE	24
1	1	1	1	1	1	1	1	2004959	BRACKET, MODULE	23
64	64	42	46	46	46	46	46	NAS620C6	WASHER, FLAT	22
24	24	8	12	12	12	12	12	1004546-4	WASHER, FLAT	21
12	12	4	6	6	6	6	6	MS16633-4014	RING, RETAINING	20
—	—	4	6	6	6	6	6	2004932-001	SCREW, JACKING	19
8	8	-	8	8	8	8	8	1001489-59	SCREW, HEX SOCKET HEAD	18
4	4	4	4	4	4	4	4	MS35216-1	SCREW, PAN HEAD, CROSS RECESSED	17
32	32	32	32	32	32	32	32	MS16995-18	SCREW, CAP SOCKET HEAD	16
1	1	1	1	1	1	1	1	1004260-20	NAMEPLATE	15
—	—	—			~~1~~	~~1~~	~~1~~	~~2004955-001~~	~~GASKET~~	~~14~~
—	—	—			~~1~~	~~1~~	~~1~~	~~2004953-002~~	~~GASKET~~	~~13~~
—	—	—			~~1~~	~~1~~	~~1~~	~~2004953-001~~	~~GASKET~~	~~12~~
1	1	1	1	1	1	1	1	2003909-011	KEYBOARD MODULE ASSY D8	11
1	1	1	1	1	1	1	1	2003901-011	POWER SUPPLY ASSY MODULE D7	10
—	6	—	—	—	6	6	6	2003902-011	INDICATOR DRIVER MODULE D1-D6	9
1	1	1	1	1	1	1	1	1006349	GASKET, BONDED, RUBBER	8
1	1	1	1	1	1	1	1	1006350	GASKET, BONDED, RUBBER	7
1	1	1	1	1	1	1	1	2004900	COVER, REAR	6
1	1	1	1	1	1	1	1	2003954-011	MAIN HOUSING ASSY	5
—	—	—	—	—	—	—	1	2003903-011	FRONT HOUSING ASSY	4
1	1	1	1	1	1	1	1	1006315	INDICATOR, DIGITAL	3
—	1	—	1	1	1	1	1	1006316	INDICATOR, ALARM	2
—	—	—	1	1	1	1	1	2004929-011	COVER, FRONT	1

2003985 K

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± DECIMALS ±.02 ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH
NEXT ASSY | USED ON
APPLICATION

MIT INSTRUMENTATION LAB
DRAWN — DATE —
CHECKED —
APPROVAL —
APPROVAL —
NASA APPROVAL —
MIT APPROVAL —

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

AGC DSKY ASSEMBLY

CODE IDENT NO 80230 | SIZE J | NASA DRAWING NO 2003985
SCALE 1/1 | WT | SHEET 1 OF 1